Summary

S-1 Joint CEQA/NEPA Document

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), and is subject to State and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under NEPA. The San Bernardino Associated Governments (SANBAG) is the project proponent, and Caltrans is the lead agency under CEQA. In addition, FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 United States Code (U.S.C.) 327.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, quite often a "lower level" document is prepared for NEPA. One of the most commonly seen joint document types is an Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

After receiving comments from the public and reviewing agencies, a Final EIR/EIS will be prepared. SANBAG and Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EIS will include responses to comments received on this Draft EIR/EIS and will identify the preferred alternative. After the Final EIR/EIS is circulated, if SANBAG and Caltrans decide to approve the project, a Notice of Determination (NOD) will be published for compliance with CEQA, and a Record of Decision (ROD) will be published for compliance with NEPA.

S-2 Purpose and Need

The project purpose is a set of objectives the project is intended to meet. The project need is the range of transportation deficiencies that the project was initiated to address.

Purpose of the Project

The purpose of the Interstate 10 Corridor Project (I-10 CP) is to improve traffic operations on Interstate 10 (I-10) in San Bernardino County to reduce congestion, increase throughput, enhance trip reliability, and accommodate long-term congestion management of the corridor for the planning design year of 2045.

In furtherance of the project's purpose, the objectives of the project are to:

- Reduce volume-to-capacity (v/c) ratios along the corridor;
- Improve travel times within the corridor;
- Relieve congestion and improve traffic flow on the regional transportation system;
- Address increased travel associated with existing and planned development;
- Provide a facility that is compatible with transit and other modal options;
- Provide consistency with the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP), where feasible and in compliance with federal and State regulations;
- Provide a cost-effective project solution;
- Minimize environmental impacts and right-of-way (ROW) acquisition; and
- Promote sustainable travel and livability for the corridor.

Need for the Project

I-10 is a critical link in the State transportation network and is used by interstate travelers, local commuters, and regional and inter-regional trucks. The efficient movement of people through San Bernardino County is limited by the existing capacity of the transportation networks.

Existing deficiencies of I-10 include:

- General purpose (GP) lanes peak-period traffic demand currently exceeds capacity; and
- I-10 high-occupancy vehicle (HOV) lanes operation is degraded during peak periods.

Forecasted deficiencies of I-10 include:

- Local and regional traffic demand is expected to increase due to population growth;
- Increase in delays;

- Increase in accidents:
- Regional/local circulation will worsen as additional traffic avoids congestion on the facility;
- Interchange/junction traffic service will worsen as additional traffic attempts to enter and exit the facility;
- Bus/multimodal travel time will increase due to congestion and become unreliable; and
- I-10 HOV will continue to degrade as speed decreases on the facility due to the increase in traffic volumes.

As described in further detail below, Alternatives 2 and 3 are considered viable project alternatives because they would achieve the project's purpose and need; however, the Transportation System Management (TSM)/Transportation Demand Management (TDM) Alternative and No Build Alternative are not considered viable project alternatives because they fail to meet the project's purpose and need.

S-3 Proposed Action

Caltrans, in cooperation with SANBAG, proposes to improve I-10 by constructing additional lane(s) and other improvements through all or a portion of the 33-mile-long segment of I-10 from the Los Angeles/San Bernardino (LA/SB) county line to Ford Street in San Bernardino County. The project limits, including transition areas, extend from approximately 0.4 mile west of White Avenue in the city of Pomona at LA PM 44.9 to Live Oak Canyon Road in the city of Yucaipa at SBd PM 37.0. Please refer to Figures 1-1 and 1-2 of this Draft EIR/EIS for project location and vicinity maps. The I-10 CP consists of a No Build Alternative (Alternative 1) and two build alternatives (Alternatives 2 and 3). Implementation of the build alternatives associated with the I-10 CP would reduce traffic congestion, increase throughput, and enhance trip reliability for the planning design year of 2045. The project is currently expected to be open to traffic in year 2025.

Alternative 2 – One High-Occupancy Vehicle Lane in Each Direction

Alternative 2 would extend the existing HOV lane in each direction of I-10 from the current HOV terminus near Haven Avenue in Ontario to Ford Street in Redlands, a distance of approximately 25 miles from SBd PM 4.7 to SBd PM 37.0. Preliminary cost estimates for this alternative are \$567 million (approximately \$659 million in future dollars), including \$446 million in construction, \$14 million in ROW and utility relocation, and \$100 million in support costs.

In addition to the mainline widening, the project includes reconstruction and/or modification of interchange ramps, local arterials, and structures that are necessary to accommodate the proposed freeway widening, including new or reconstruction of retaining walls and soundwalls where appropriate. Existing concrete barriers, temporary railings, metal beam guardrails, and thrie-beam barriers in the median of Alternative 2 improvements extend through 3 system interchanges (I-10/Interstate 15 [I-15] interchange, I-10/Interstate 215 [I-215] interchange, and I-10/State Route [SR] 210 interchange), in addition to 21 local street interchanges from Haven Avenue to Ford Street.

The proposed improvements under Alternative 2 would involve construction work within the following routes and post miles:

- 08-SBd-10 PM 4.7/R37.0
- 08-SBd-15 PM 0.7/4.0
- 08-SBd-38 PM 0.0/0.3
- 08-SBd-210 PM R33.0/R31.5
- 08-SBd-215 PM 2.1/5.7 9

Alternative 2 Mainline Improvements

- Add one HOV lane in each direction from Haven Avenue to Ford Street.
- Re-establish existing auxiliary lanes along the corridor.
- Construct new westbound (WB) auxiliary lane between Rancho Avenue and La Cadena Drive.

Alternative 2 Connector and Interchange Ramp Improvements

Alternative 2 would require reconstruction of several connector and interchange ramps due to the I-10 widening. Table 2-1 of the EIR/EIS summarizes the proposed connector and interchange ramp improvements along the project corridor.

Alternative 2 Local Street Improvements

Richardson Street, as a local street, and Tennessee Street, as a connector street, are two arterials crossing over I-10 that would need to be replaced with a longer-span structure to accommodate the widened freeway under Alternative 2.

Alternative 2 Structure Improvements

Alternative 2 would necessitate replacement of 3 structures and modification of 44 structures along the corridor.

Alternative 2 Railroad Involvement

Four railroad crossings over or under I-10 require bridgework to construct the proposed freeway widening:

- 1. Union Pacific Railroad (UPRR) Kaiser Spur Overhead (OH) (widen)
- 2. Burlington Northern Santa Fe (BNSF) Colton Crossing OH (widen)
- 3. Pavilion Spur OH (widen or abandon)
- 4. BNSF West Redlands OH (widen)

Alternative 2 Drainage Improvements

Several drainage structures along the project corridor would be improved as part of the proposed project, including 12 that cross I-10 and 1 that parallels I-10.

Pedestrian and Bicycle Facilities

Existing sidewalks within the project limits would be maintained. Alternative 2 requires reconstruction of Richardson Street and Tennessee Street. The sidewalks on those streets would be replaced in kind. Pedestrian facilities on arterials being improved would meet current Americans with Disabilities Act (ADA) standards.

Existing bike lanes and trails within the project limits would be maintained. In addition, new bike lanes (Class II or III) would be incorporated in the design of the proposed arterial improvements at Tennessee Street.

Transit Operator Planning

Omnitrans express routes would be able to use approximately 24 miles of the HOV lanes on I-10. The I-10 CP would add bus stops at the Sierra Avenue interchange and incorporate associated intersection, pedestrian access, and traffic signal improvements to accommodate the Omnitrans express bus services.

Alternative 3 - Two Express Lanes in Each Direction

SANBAG identified Alternative 3 as the Locally Preferred Alternative (LPA), as discussed in Chapter 2, Project Alternatives.

Alternative 3 would provide two Express Lanes in each direction of I-10 from the LA/SB county line to California Street in Redlands and one Express Lane in each direction from California Street to Ford Street in Redlands, a total of 33 miles. West of Haven Avenue, a single new lane would be constructed and combined with the existing HOV lane to provide two Express Lanes in each direction; east of Haven Avenue, all Express Lanes would be constructed by the project.

The Express Lanes would be price-managed lanes, otherwise known as high-occupancy Express Lanes, in which vehicles not meeting the minimum occupancy requirement would need to pay a toll. This is done to encourage ride-sharing along the freeway. Preliminary cost estimates for this alternative are \$1.489 billion (approximately \$1.726 billion in future dollars), including \$1.176 billion in construction, \$82 million in ROW and utility relocation, and \$220 million in support costs. The term Express Lanes refers to managed lanes, which would operate as high-occupancy toll (HOT) lanes, free for motorcycle/bus/emergency vehicles/some HOVs. The lanes would be managed to optimize free-flow conditions, so that a journey through the corridor would be possible as free-flow, even when congestion on I-10 is severe with gridlock.

Alternative 3 project limits pass through 3 system interchanges (I-10/I-15 interchange, I-10/I-215 interchange, and I-10/SR-210 interchange) and 29 local street interchanges, including 1 interchange (Indian Hill Boulevard) in Los Angeles County. Alternative 3 would require reconstruction of several freeway-to-freeway connectors and interchange ramps to accommodate the I-10 widening.

Alternative 3 Mainline Improvements

- Add one Express Lane in each direction from the LA/SB county line to Haven Avenue to operate jointly with existing HOV lanes as two Express Lanes in each direction
- Add two Express Lanes in each direction from Haven Avenue to California Street
- Add one Express Lane in each direction from California Street to Ford Street
- Provide 10 at-grade access points, 9 with an additional weave lane and 1 as a weave zone
- Provide California Highway Patrol (CHP) enforcement/observation areas in the median at selected locations along the corridor
- Re-establish existing auxiliary lanes along the corridor
- Construct new eastbound (EB) auxiliary lane between Mountain Avenue and Euclid Avenue
- Modify existing WB auxiliary lane at Haven Avenue WB on-ramp to begin at Haven Avenue WB loop on-ramp
- Modify existing EB auxiliary lane at Haven Avenue EB on-ramp to begin at Haven Avenue EB loop on-ramp
- Extend WB auxiliary lane preceding the Riverside Avenue off-ramp to Pepper Avenue

Construct new WB auxiliary lane between Rancho Avenue and La Cadena Drive

The proposed improvements under Alternative 3 would involve construction work within the following routes and post miles:

- 07-LA-10 PM 44.9/48.3
- 08-SBd-10 PM 0.0/R37.0
- 08-SBd-15 PM 0.7/4.0
- 08-SBd-38 PM 0.0/0.3
- 08-SBd-83 PM 10.7/11.5
- 08-SBd-210 PM R33.0/R31.5
- 08-SBd-215 PM 2.1/5.7

To accommodate two Express Lanes, the project includes reconstruction and/or modification of existing interchange ramps, local arterials, and structures, including new or reconstruction of retaining walls and soundwalls. Existing concrete barrier, temporary railings, metal beam guardrails, and thrie-beam barriers in the median of I-10 would be replaced with Type 60G concrete barriers, and median lighting at intermediate access points would be provided. Existing auxiliary lanes would be reestablished in kind and additional ones added where warranted. CHP enforcement areas would be provided on I-10 at selected locations, including on-ramps and medians.

Ingress/Egress Access Points

Proposed entry and exit points for the toll lanes will be provided by 10 at-grade ingress/egress (I/E) access points in each direction along the project corridor, including 9 additional weave lanes.

- Mountain Avenue, Upland
- 6th Street, Ontario
- Haven Avenue, Ontario
- Etiwanda Avenue, Fontana
- Citrus Avenue, Fontana
- Cedar Avenue, Bloomington
- Pepper Avenue, Colton
- Tippecanoe Avenue, San Bernardino
- California Street (transition from 2 to 1 Express Lane)
- Orange Street (weave zone)

Except for the California Street I/E and Orange Street I/E, all other access points are proposed with an additional weave or speed change lane provided between the No. 1 GP lane and the No. 2 Express Lane.

At the California Street I/E, a separate I/E is provided in the EB direction. At the egress location, the No. 1 EB Express Lane continues while the No. 2 Express Lane becomes a GP lane. A separate ingress opening is provided downstream. In the WB direction, the No. 2 Express Lane is opened up just upstream of the California Street I/E and is anticipated to operate as a weave lane.

The Orange Street I/E is proposed as a weave zone in both directions without a weave lane between the No. 1 GP lane and the No. 2 Express Lane. It would operate similarly to existing HOV lane I/E locations. A weave zone is a portion of the freeway where a single lane is used by vehicles slowing down to exit while other vehicles are using the same lane to increase speed while entering the highway.

Alternative 3 Connector and Interchange Ramp Improvements

Alternative 3 would require reconstruction of several freeway-to-freeway connector ramps and interchange ramps to accommodate the two Express Lanes. Table 2-6 of the EIR/EIS provides a summary of connector and interchange improvements that are required in Alternative 3.

Alternative 3 Local Street Improvements

Nine arterial streets crossing under or over I-10 would be reconstructed by widening and lengthening to accommodate the I-10 improvements, as listed below:

- 1. Monte Vista Avenue
- 2. San Antonio Avenue
- 3. Euclid Avenue
- 4. Sultana Avenue
- 5. Campus Avenue
- 6. 6th Street
- 7. Vineyard Avenue
- 8. Richardson Street
- 9. Tennessee Street

Two arterials that parallel I-10 would be modified as part of the proposed project improvements:

- 1. Palo Verde Street between Mills Avenue and Monte Vista Avenue
- 2. J Street between 3rd Street and Pennsylvania Avenue (near Rancho Avenue and Colton OH)

Alternative 3 Railroad Involvement

Five railroad crossings over or under I-10 would require bridgework to construct the proposed freeway widening:

- 1. UPRR Kaiser Spur OH (widen)
- 2. UPRR Slover Mountain UP (replace)
- 3. BNSF Colton Crossing OH (widen)
- 4. UPRR Pavillion Spur OH (widen or abandon)
- 5. BNSF West Redlands OH (widen)

Alternative 3 Structure Improvements

Alternative 3 would necessitate replacement of 12 structures and modification of 59 structures.

Alternative 3 Drainage Improvements

Several drainage structures along the project corridor would be improved as part of the proposed project, including 17 that cross I-10 and 2 that parallel I-10.

Transportation System Management/Transportation Demand Management Alternative

A TSM/TDM Alternative was analyzed for the I-10 corridor. This alternative did not meet the project purpose and is further described in Section 2.2.5, Alternatives Considered but Eliminated from Further Discussion. The TSM/TDM Alternative consists primarily of operational investments, policies, and actions aimed at improving traffic flow, promoting travel safety, and increasing transit usage and rideshare participation. Although this alternative would provide minimal enhancement of operations, it would not maximize throughput or provide trip reliability for the corridor.

TSM consists of strategies to maximize efficiency of the existing facility by providing options such as ridesharing, parking, and traffic-signal optimization. TSM options to improve traffic flow typically increase the number of vehicle trips a facility can carry

without increasing the number of through lanes. Such strategies include replacing existing stop signs with traffic signals at intersections to improve existing peak-hour traffic flow and to reduce queuing of vehicles. TSM also encourages automobile, public and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. Multimodal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and transit.

TDM focuses on regional strategies for reducing the number of vehicle trips and vehicle miles traveled (VMT), as well as increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation choice in terms of travel experience. Typical activities within this alternative reduce the amount of single-occupancy vehicle trips by providing funds to regional agencies that are actively promoting ridesharing, maintaining rideshare databases, and providing limited rideshare services to employers and individuals. Promoting mass transit and facilitating nonmotorized alternatives are two such examples, but TDM strategies may also include reducing the need for travel altogether through initiatives such as telecommuting.

The TSM/TDM components that have been included in the proposed build alternatives are described in Section 2.2.1.1, Common Design Features of the Build Alternatives.

No Build Alternative

The No Build Alternative would not provide any improvements to the I-10 corridor within the project limits. No additional lanes or interchange improvements would be provided, except by other planned projects identified in the growth/cumulative impacts section of this environmental document. The No Build Alternative configuration is not expected to accommodate future traffic demand, improve speed or travel times, or relieve congestion. Congestion along the corridor would continue and is expected to deteriorate by 2045.

Direct effects of the No Build Alternative would include continued deterioration of VMT, level of service (LOS), and congestion of freeway and local interchange operations. Indirect and cumulative effects of the No Build Alternative are projected to increase effects on the communities related to increased commute times and traffic diversion through adjacent neighborhoods. Additionally, the No Build Alternative could increase the amount of time the corridor cities and users/travelers have to

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endure construction-related effects, as corridor needs would need to be addressed to accommodate future traffic demand through many smaller projects completed over an extended period of time. Figure 2-5 displays the current I-10 lane configurations associated with the No Build Alternative.

The No Build Alternative is not considered a viable project alternative because it would not achieve the project's purpose. The No Build Alternative would not meet the following aspects of the project's purpose:

- Reduce congestion;
- Increase throughput;
- Enhance trip reliability for the planning design year of 2045; or
- Accommodate long-term congestion management of the corridor.

Construction

Construction of the proposed project is planned to commence in 2019 and is anticipated to be open for use by 2024. For Alternative 2, the project is anticipated to be implemented using the design-bid-build delivery process and constructed over a period of 42 months (3.5 years) under one construction contract. Due to the scale of Alternative 3 and the need to minimize impacts and maintain traffic during construction, the proposed improvements are envisioned to be constructed in two construction stages from west to east with some overlap. Although there is overlap in the construction of two contracts, the overall construction period within the overlap area will be less than 12 months. Alternative 3 is anticipated to utilize a design-build delivery process. Alternative 3 is anticipated to be constructed in two project contracts over a period of 60 months (5 years) with Contract 1 covering the proposed improvements from the LA/SB county line to I-15 and Contract 2 covering the improvements from I-15 to Ford Street. Construction would intermittently move along the length of the alignment, and it is not anticipated that construction activity would occur in one location for more than 5 years. Construction activities would not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 Code of Federal Regulations [CFR] 93.123(c)(5)).

Construction of interchange improvements, consisting of freeway ramp reconstruction, local arterial improvements, and overcrossing structure replacement, is envisioned to be staggered throughout the corridor to minimize impacting two consecutive interchanges or closing two consecutive on- or off-ramps at the same

time. If feasible, arterials and overcrossing improvements that would add capacity over the existing condition would be constructed in the earlier stages in an attempt to ease traffic congestion during subsequent construction stages.

Construction staging area (CSA) locations will be finalized during the plans, specifications, and estimates (PS&E) phase, but they are anticipated to generally be located within the existing ROW at interchange locations. The PS&E phase of the project involves the transition of the project from concept through design and includes performing topographic, geotechnical, and hydraulic field reconnaissance and analysis.

Additionally, no material borrow sites have been identified for this project. The contractor will be responsible for ensuring that all import material comes from permitted commercial material providers and does not contain hazardous materials, in accordance with 2015 Caltrans Standard Special Specifications 19-7.

Construction operation would necessitate the closures of various facilities, such as the I-10 mainline, branch connectors, interchange ramps, and local arterials. Closures of these facilities may be overnight, short-term, during an extended weekend (i.e., 55-hour window from Friday night to Monday morning), or long-term, as discussed in Section 3.1.4, Community Impacts. Lane reductions and restrictions are also anticipated on mainline, connector, ramp, and arterial roadway facilities to accommodate construction activities. Long-term closure of arterial overcrossings may be employed during construction to expedite construction and shorten the duration that the overcrossing is out of service.

S-4 Project Impacts

Table S-1 summarizes project impacts by alternative and identifies avoidance and minimization measures. Where applicable, these measures are sometimes also mitigation measures, as discussed in Chapter 4 of this Draft EIR/EIS. For detailed information regarding the impacts of each alternative, see Chapters 3 and 4 of this Draft EIR/EIS and the associated technical studies.

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Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
Project Cost	Not Applicable.	\$567 million (approximately \$659 million in future dollars).	\$1.491 billion (approximately \$1.729 billion in future dollars).	Not applicable.
Construction Duration	Not Applicable.	42 months.	60 months.	Not applicable.
Land Use	Inconsistent with regional and local planning goals and policies.	Existing and Future Land Use Permanent conversion, through partial acquisition, of approximately 0.33 acre of land designated as other land uses to transportation. Temporary and intermittent inconvenience for some current land use operations due to temporary traffic lane and ramp closures and temporary construction easements (TCEs) on 122 parcels to accommodate construction of the project. Consistency with State, Regional, and Local Plans and Programs Consistent with the goals, objectives, and policies of all surrounding communities' General Plans. Alternative 2 is consistent with the 2012 Regional Transportation Plan (RTP) and 2013 Federal Transportation Improvement Program (FTIP). Parks and Recreational Facilities Santa Ana River Trail Direct Use: None Temporary Use: Yes (temporary overnight closures of the trail would be required to widen the I-10 mainline bridge) Constructive Use: None Temporary Use: Yes (1.12 miles of the trail would be affected by temporary closures and detours, which would be required to widen the I-10 mainline bridge) Constructive Use: None Temporary Use: Yes (1.12 miles of the trail would be affected by temporary closures and detours, which would be required to widen the I-10 mainline bridge) Constructive Use: None	Existing and Future Land Use Permanent conversion, through partial and full acquisition, of approximately 21.03 acres of land designated as other land uses to transportation. Temporary and intermittent inconvenience for some current land use operations due to temporary traffic lane and ramp closures and TCEs on 433 parcels to accommodate construction of the project. Consistency with State, Regional, and Local Plans and Programs Consistent with the goals, objectives, and policies of all surrounding communities' General Plans. Alternative 3 is consistent with the 2012 RTP and 2013 FTIP. Parks and Recreational Facilities MacArthur Park Direct Use: Yes (0.14-acre permanent acquisition, 0.04-acre footing easement) Temporary Use: Yes (0.16-acre temporary construction easement [TCE]) Constructive Use: None Edison Elementary School Direct Use: None Temporary Use: Yes (0.08-acre TCE) Constructive Use: None Santa Ana River Trail Direct Use: None Temporary Use: Yes (temporary overnight closures of the trail would be required to widen the I-10 mainline bridge) Constructive Use: None Temporary Use: Yes (1.12 miles of the trail would be affected by temporary closures and detours, which would be required to widen the I-10 mainline bridge) Constructive Use: None	LU-1: San Bernardino Associated Governments (SANBAG) shall request the County of San Bernardino and the City of Montclair to armend their respective General Plans to reflect the selected build alternative and the modification of land use designations for properties that would be acquired for the project that are not currently designated for transportation uses. LU-2: Return any landscaping temporarily disturbed or removed during construction to pre-project or better conditions. LU-3: Access and circulation for recreational users will be maintained at impacted locations identified in Section 3.1.1 and the Section 4(f) Technical Study. Detours for any temporary closures of the recreational facilities identified will be implemented. Post informational and detour signage in advance to inform users of any temporary closures and detour routes. LU-4: The trail closures would occur at night after sunset to avoid all impacts to users of the Santa Ana River Trail. Given that the Santa Ana River Trail is only open from sunrise to sunset, work outside of these hours would not require closure or detour of the trail. LU-5: The Right-of-Way Agent and Project manager will coordinate with the City of Montclair to provide the compensation required under the Park Preservation Act.

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
Growth	The No Build Alternative is not consistent with the regional mobility goals in the study area; however, it is not anticipated to influence growth within the study area.	No impact.	No impact.	No measures required.
Farmlands/ Timberlands	No impact.	No impact.	8 farmland parcels would result in partial acquisition, footing easements, or temporary impacts.	FARM-1: Environmentally sensitive area (ESA) fencing will be installed at the limits of construction for all temporarily and permanently impacted farmlands prior to initiating work within or adjacent to these sites. No construction will occur within these ESAs. All construction equipment will be operated in a manner so as to prevent accidental damage to nearby ESAs. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESAs. Silt fence barriers will be installed at the ESA boundaries to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities. FARM-2: All existing citrus trees within the proposed partial acquisition and TCE at Assessor's Parcel Number (APN) 029-206-402 will be protected in place. FARM-3: All farmlands temporarily impacted by the project will be restored to pre-project conditions. FARM-4: Access to all temporarily and permanently impacted farmlands will be maintained during construction and operation.
Community	The quality of accessibility to and mobility within corridor communities within the project area would continue to deteriorate. This would potentially erode community cohesion-related activities over time.	Community Character and Cohesion Construction of Alternative 2 would not displace residents or businesses. Relocations Under Alternative 2, six partial acquisitions would be required, totaling 0.33 acres. In addition, permanent underground footing easements would be needed at four parcels, totaling 0.14 acre. No residential or nonresidential properties would be displaced. Environmental Justice Environmental justice populations exist within the study area, particularly in the western portion, while the eastern portion has a more affluent population consisting of fewer minorities. Both build alternatives would benefit most study area residents, including minority and low-income populations, by improving mobility and circulation throughout the study area. Alternative 2 would not cause disproportionately high and adverse effects on minority or low-income populations within the context and intent of Executive Order (EO) 12898.	Community Character and Cohesion Construction of Alternative 3 would displace 42 residential units (109 displacees) and 12 nonresidential properties, and it would result in physical changes that could permanently alter the character of the existing community. Relocations Under Alternative 3, 150 partial acquisitions would be required, totaling 9.82 acres. In addition, permanent underground footing easements would be needed at 134 parcels, totaling 4.39 acres. A total of 42 residential units (109 displacees) in the cities of Montclair, Ontario, and Fontana would be acquired to construct Alternative 3, including 23 single-family residences and 19 units in multi-family residences. Based on preliminary engineering, displacement of 12 businesses that are currently used for nonresidential purposes would be required to construct Alternative 3; although, the utility- related structure would be displaced to a different location on its existing parcel. These nonresidential displacements would occur in the cities of Montclair, Fontana, Rialto, and Colton. Environmental Justice Environmental justice populations exist within the study area, particularly in the western portion, including the cities of Pomona, Montclair, Ontario, Fontana, Bloomington, Rialto, Colton, and San Bernardino, while the	Community Impacts COM-1: No two consecutive/adjacent off-ramps or two consecutive/adjacent on-ramps in the same direction will be closed concurrently. COM-2: Business access will be maintained at all times during construction, consistent with Section 7-1.03 Public Convenience of Standard Specifications (2015). COM-3: To keep residents, businesses, community services, and service providers within the affected area informed about the proposed project construction schedule and traffic-impacted areas, provide motorist information (i.e., existing changeable message signs [CMSs], portable CMSs, stationary ground-mounted signs, traffic radio announcements, and the Caltrans Highway Information Network [CHIN]). COM-4: Traffic circulation construction strategies (i.e., lane closure restrictions during holidays and special local events, closure of secondary streets during construction to allow quick construction and reopening, lane modifications to maintain the number of lanes needed, allowing night work and extended weekend work, maintaining business access, and maintaining pedestrian and bicycle access) will be incorporated into project design to keep residents, businesses, community services, and service providers within the affected area informed about the proposed project construction schedule and traffic-impacted areas. COM-5: Implementation of alternate and detour routes strategies; street/intersection improvements (e.g., widening, pavement rehabilitation, removal of median) to provide added capacity to handle detour traffic; signal improvements; adjustment of signal timing and/or signal coordination to increase vehicle throughput, improve traffic flow and optimize intersection capacity; turn restrictions at intersections and roadways necessary to reduce congestion and improve safety; and parking restrictions on alternate and detour routes during work hours to increase capacity, reduce traffic conflicts, and improve access. COM-6: Coordination with the relevant parks and recreation departments of affected park

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
			eastern portion has a more affluent population consisting of fewer minorities. Both build alternatives would benefit most study area residents, including minority and low-income populations, by improving mobility and	COM-9: Close coordination with railroad owners and operators will be conducted during the PS&E and construction phases to minimize impacts to railroad operations.
				COM-10: During design and construction, the Project Manager, Resident Engineer, and Contractor work closely with affected property owners to identify means to avoid and minimize parking impacts, including space management such as restriping of parking areas and identifying parking replacement options. For those anticipated impacts, the property owners shall receive compensation for the partial loss of property through the right-of-way (ROW) acquisition process.
			disproportionately high and adverse effects on minority or low-income populations within the context and intent of EO 12898.	COM-11: Maintain a robust public outreach program to minimize objections to the unavoidable construction impacts. SANBAG will implement a community information plan to maintain good relations with the public by providing timely information about anticipated construction activities to affected citizens and adjacent property owners. Notification methods could include, but are not limited to, website, fliers, mailers, e-mail notifications, and electronic messaging on the freeway.
				COM-12: Design all pedestrian facilities to meet or exceed requirements of the Americans with Disabilities Act (ADA) and current safety standards. Access to the pedestrian and bicycle facilities shall be maintained to the extent practicable during the construction period.
				COM-13: Coordinate with Metrolink, Foothill Transit, Omnitrans, and other affected transit providers to request and comply with applicable procedures for any required temporary bus stop relocations or other disruptions to transit service during construction.
				Relocations
				COM-14: Where acquisition and relocation are unavoidable, the provisions of the Uniform Act and the 1987 Amendments, as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by the United States Department of Transportation (USDOT) (March 2, 1989) and where applicable, the California Public Park Preservation Act of 1971, will be followed. An appraisal of the affected property will be obtained, and an offer for the full appraisal will be made.
				Environmental Justice
				COM-15: Create a Low-Income Equity Program, which will include policies to enable low-income households to utilize the proposed project improvements, such as waiving account maintenance fees or allowing the use of cash to open and replenish toll accounts and/or implementing video license plate recognition as an alternative to toll-collection technology.
				Account maintenance fees often apply to toll road or Express Lane transponders that do not incur a minimum amount in tolls in a stated period of time. Waiving these fees would allow low-income and minority communities to utilize the Express Lanes without being required to spend a minimum amount per month. This, in addition to allowing the use of cash to open and replenish toll accounts and/or implementing video license plate recognition, would make the Express Lanes more accessible and equitable for these communities.
				COM-16: To minimize impacts to surrounding low-income or minority communities, continue to conduct outreach activities targeted to low-income residents during the planning, design, and implementation process for these corridors, regardless of which alternative is chosen. Community outreach will include providing timely information about anticipated construction activities to affected citizens and adjacent property owners. Notification methods could include, but are not limited to, Web site, fliers, mailers, e-mail notifications, and electronic messaging on the freeway.

Table S-1 Project Impact Summary Table

Resource	Alternative 1	Alternative 2	Alternative 3	
Impacts	(No Build)	(One HOV Lane in Each Direction)	(Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
Utilities/ Emergency Services	No impact.	Approximately 69 utilities have the potential to be affected by the proposed improvements.	Approximately 159 utilities have the potential to be affected by the proposed improvements. The Monte Vista Pump House would be removed from its existing location, but it would be relocated on the same parcel.	 UT-1: During PS&E, the Project Engineer will prepare utility relocation plans in consultation with the affected utility providers/owners for those utility facilities that will need to be relocated, removed, or protected in-place. If relocation is necessary, the final design will focus on relocating utilities within the State ROW or other existing public ROWs and/or easements. If relocation outside of existing or the additional public ROWs and/or easements required for the project is necessary, the final design will focus on relocating those facilities to minimize environmental impacts as a result of project construction and ongoing maintenance and repair activities. UT-2: Protection of Metropolitan Water District (MWD) Upper Feeder Pipeline. To protect the integrity of the MWD pipeline, geotechnical exploration and analysis may be required during the PS&E phase, including: Stress analysis to determine the increased load imposed on the affected reach of the pipeline. Settlement/rebound analysis to determine potential settlement and lateral displacement. Slope stability analysis to determine potential induced instability of the affected reach of the pipeline. UT-3: To minimize risk of fire prior to and during any construction activities, Caltrans will require implementation of the following to minimize the risk of fires during construction: Coordinate with the applicable local fire department to identify and maintain defensible spaces around active construction areas.
				Coordinate with the applicable local fire department to identify and maintain firefighting equipment (e.g., extinguishers, shovels, water tankers) in active construction areas.
				Post emergency services phone numbers (i.e., fire, emergency medical, police) in visible locations in all active construction areas.
Traffic and Transportation/Pedestrian and Bicycle Facilities	The quality of accessibility to and mobility within area communities would continue to deteriorate.	Alternative 2 daily vehicle miles traveled (VMT) in the study corridor is forecast to be 8,451,000 in 2025 and 10,013,000 in 2045, compared to 8,195,000 in 2025 and 9,746,000 in 2045 under Alternative 1 (No Build). Operations for general purpose (GP) lanes under Alternative 2 in year 2025: • Level of service (LOS) F during both the AM and PM peak hours in both directions between the Los Angeles/San Bernardino (LA/SB) county line and California Street • LOS C in the eastbound (EB) direction during the AM peak hour and LOS C in the westbound (WB) direction during the PM peak hour between California Street and Ford Street Operations for high-occupancy vehicle (HOV) lanes under Alternative 2 in year 2025: • Between the LA/SB county line and Haven Avenue, operations are anticipated to be LOS F in the WB direction during both the AM and PM peak hour, LOS F in the EB direction during the AM peak hour.	Alternative 3 daily VMT in the study corridor is forecast to be 8,937,000 in 2025 and 10,736,000 in 2045, compared to 8,195,000 in 2025 and 9,746,000 in 2045 under Alternative 1 (No Build). Operations for GP lanes under Alternative 3 in year 2025: LOS F during both the AM and PM peak hours in both directions between the LA/SB county line and California Street in Redlands LOS C during the AM peak hour in the EB direction and LOS C during the PM peak hour in WB direction between California Street to Ford Street Operations for HOV lanes under Alternative 3 in year 2025: LOS D or better during both the AM and PM peak hours in both directions between the LA/SB county line and Ford Street Operations for GP lanes under Alternative 3 in year 2045: LOS F during both the AM and PM peak hours in both directions between the LA/SB county line and California Street LOS D during both the AM and PM peak hours in both directions between California Street to Ford Street Operations for HOV lanes under Alternative 3 in year 2045:	T-1: A Final TMP will be prepared prior to project construction that identifies methods to avoid and minimize construction-related traffic and circulation effects and minimize impacts to pedestrian and bicycle access, including ADA-compliant features, as a result of the proposed project. During construction, the contractor shall implement the methods identified in the Final TMP. T-2: Every effort will be made to incorporate the following TSM and TDM elements: Improved ramp metering hardware and software and closed-circuit television (CCTV) systems for viewing ramps and nearby arterials At locations of interchange improvements, upgraded traffic signals interconnected and coordinated with adjacent signals and ramp meters Additional way-finding signs on freeways and arterials Design of on- and off-ramps to limit impacts to nonmotorized travel and preserve access to bike lanes and trails Intelligent Transportation System (ITS) elements, including fiber-optic and other communication systems for improved connectivity and remote management; changeable message signs (CMS); CCTV coverage of the entire freeway mainline, ramps, and adjacent arterials; video detection systems; and vehicle detection system (VDS) for volume, speed, and vehicle classification Traveler Information Management System improvements to enhance dissemination of real-time information on roadway conditions Vanpool initiatives Carpooling programs Promote and integrate public transit design features CCTV with Pan-Tilt-Zoom (PTZ) capability Ramp Metering System (RMS)

Table S-1 Project Impact Summary Table

Resource	Alternative 1	Alternative 2	Alternative 3	Avoidance, Minimization and/or Mitigation Measures
Impacts	(No Build)	(One HOV Lane in Each Direction)	(Two Express Lanes in Each Direction)	Avoidance, withinization and/or witigation measures
		both directions and LOS D to F during the PM peak hour in both directions between Haven Avenue and Ford Street Operations for GP lanes under Alternative 2 in year 2045: LOS F during both the AM and PM peak hours in both directions between the LA/SB county line and California Street LOS D during the AM peak hour in the EB direction and LOS C during the PM peak hour in the WB direction between California Street and Ford Street Operations for HOV lanes under Alternative 2 in year 2045: LOS F during both the AM and PM peak hour in both directions between the LA/SB county line and Haven Avenue LOS F during both the AM and PM peak hour in both directions between Haven Avenue and Ford Street LOS D in the EB direction during the AM peak hour between Haven Avenue and Ford Street LOS E in the WB direction during the PM peak hour between California Street and Ford Street	in year 2045: LOS D or better during both the AM and PM peak hours in both directions between the LA/SB county line and Ford Street	
Visual/ Aesthetics	No impact.	Differences in visual effects would primarily consist of roadway views pertaining to pavement width and bridge replacements. The project would result in changes to the visual quality and/or character associated with vegetation removal, construction activities, and the introduction of new and modified permanent structures. Removal of the eucalyptus trees and other vegetation within the interchange areas would likely have the greatest impact on the visual quality; however, this effect would remain until trees grow back to existing conditions. Depending on the species selected, the point at which visual maturity is reached will vary between 15 to 25 years. Other elements, such as replacement structures, new retaining walls, and soundwalls, would be a permanent change to the elements within the existing viewsheds along the corridor. The summary below describes the anticipated changes to the visual environment by each project element.	Differences in visual effects would primarily consist of roadway views pertaining to pavement width and bridge replacements. The project would result in changes to the visual quality and/or character associated with vegetation removal, construction activities, and the introduction of new and modified permanent structures. Removal of the eucalyptus trees and other vegetation within the interchange areas would likely have the greatest impact on the visual quality; however, this effect would remain until trees grow back to existing conditions. Depending on the species selected, the point at which visual maturity is reached will vary between 15 to 25 years. Other elements, such as replacement structures, new retaining walls, and soundwalls, would be a permanent change to the elements within the existing viewsheds along the corridor. The summary below describes the anticipated changes to the visual environment by each project element. Overcrossings/Bridges: Construction of	VA-1: For the application of aesthetics and landscape in the corridor, follow the guidelines from the Interstate 10 Corridor Master Plan, as developed by Caltrans, dated November 2011. VA-2: Beginning with preliminary design and continuing through PS&E and construction, save and protect as much existing vegetation in the corridor as feasible, especially eucalyptus and other skyline trees. VA-3: Survey exact locations for all existing trees and, in particular, the eucalyptus windrows/colonnades, and include in plan set. VA-4: Protect the drip zone of isolated trees during construction with temporary fencing. VA-5: Protect large infield areas of existing plantings to be preserved through the construction period with temporary fencing. VA-6: Beginning with preliminary design and continuing through PS&E and construction, develop construction plans that apply aesthetic treatments, including color, textures, and patterns, to the soundwalls that follow the guidelines in the Interstate 10 Corridor Master Plan. VA-7: As part of the project, include a redesign of the existing San Bernardino Gateway soundwall at the county line. VA-8: Include vine plantings on one or both faces of soundwalls wherever feasible (given Caltrans setback and maintenance requirements). If vines are only planted on one side of the wall, include vine portals in the design of the wall to accommodate vine access to both sides of the wall. VA-9: Beginning with preliminary design and continuing through PS&E and construction, develop construction plans that apply aesthetic treatments to the retaining walls that follow the guidelines for color, patterns, and textures, as outlined in the Interstate 10 Corridor Master Plan. VA-10: Beginning with preliminary design and continuing through PS&E and construction, develop construction plans that apply aesthetic treatments, including color, texture, and patterns, to the proposed bridges in the corridor that follow the guidelines in the Interstate 10 Corridor Master Plan.

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
		Overcrossings/Bridges: Construction of Alternative 2 would require the following improvements to overcrossings/bridges:	Alternative 3 would require the following improvements to overcrossings/bridges: 12 structure replacements	VA-11: Design the aesthetics of the Euclid Avenue Bridge over I-10 that is consistent with the requirements of the local communities, including plantings on the bridge, decorative fencing, and replacement/reconstruction of existing historically contributing elements.
		 3 structure replacements 44 structure widening/modification	59 structure widening/modifications	VA-12: Include aesthetic treatment on concrete median barrier, including color, texture, and patterns, that are consistent with the Interstate 10 Corridor Master Plan.
		Vegetation: Removal of approximately 374 eucalyptus trees.	Vegetation: Removal of approximately 1,148 eucalyptus trees.	VA-13: Design fencing to match the ornamental fencing shown in the Interstate 10 Corridor Master Plan for all pedestrian fencing on all overcrossings, pedestrian bridges, or other elements associated with pedestrian traffic.
		Retaining Walls: 67,000 linear feet of retaining walls. Soundwalls: 17 new soundwalls.	Retaining Walls: 180,000 linear feet of retaining walls. Soundwalls: 27 new soundwalls.	VA-14: Beginning with preliminary design and continuing through PS&E and construction, landscape and revegetate disturbed areas to the greatest extent feasible, as directed by the Caltrans District Landscape Architect. SANBAG will facilitate coordination between various construction stages to ensure that planting is not completed until construction in that area is complete and no further disturbance will occur.
				VA-15: Provide replacement plants at the rate determined by the Caltrans District Landscape Architect. At a minimum, use a replacement ratio of 2:1, unless a higher ratio is required by the District Landscape Architect, to address the large number of removals that have occurred in the corridor.
				VA-16: Include skyline trees in the planting palette to bring down the scale of the new freeway elements. Where feasible, re-establish the existing colonnades/windrows of eucalyptus.
				VA17: Focus plantings on drought-tolerant and native species of trees and shrubs to the extent feasible.
				VA-18: Focus all replanting within the project ROW. Where insufficient space, locations, or water limits the plantings, give consideration to planting within the adjacent communities, beyond the ROW, if other agencies commit to maintenance of these plantings.
				VA-19: Plant trees to the maximum extent feasible, given space constraints, to provide screening of the facility and structures.
				VA-20: Commence replanting the corridor prior to the end of the construction period.
				VA-21: Install trees in a variety of sizes from 36-inch box, 24-inch box, and 15-gallon containers, with 24-inch box trees being the dominant size at installation.
				VA-22: Install required Caltrans Maintenance access roads through the landscape so that these elements are integral to the overall design.
				VA-23: Provide a permanent irrigation system to all plantings. All irrigation should follow the latest requirements for design and installation, including any requirements associated with drought, water restrictions, recycled water use, and water conservation as required by Caltrans.
				VA-24: Use reclaimed/recycled water as sources for all irrigation systems, where feasible, including any recycled/reclaimed water supply within 250 feet of the project corridor.
				VA-25: Include a 3-year plant and irrigation maintenance period as part of the construction period to provide a single source of maintenance through the establishment period.
				VA-26: Beginning with preliminary design and continuing through PS&E and construction, use drainage and water quality elements, where required, that maximize the allowable landscape.
				VA-27: Locate basins so that they would be at least 10 feet from the edge of the Caltrans plant setback to allow landscape screening to be installed.
				VA-28: Design infiltration/detention basins so that they appear to be a natural landscape feature, such as a dry streambed or a riparian pool. Shape these elements in an informal, curvilinear manner to the greatest extent possible.
				VA-29: Incorporate slope rounding, variable gradients, and similar techniques to the surrounding topography of any basin slope to de-emphasize the edge. If a wall or hard feature is necessary, its design must appear integral to the overall design concept.
				VA-30: Locate maintenance access drives in unobtrusive areas away from local streets. Such drives must consist of inert materials or herbaceous groundcover that is visually compatible with the surrounding landscape.
				VA-31: Design basins so that chain-link perimeter fencing is not required.
				VA-32: Design all visible concrete structures and surfaces to visually blend with the adjacent landscaping and natural plantings.
				VA-33: Design rock slope protection to consist of aesthetically pleasing whole material with a variety of sizes.

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
				VA-34: Limit the use of bioswales within corridor landscape areas. If they must be used, locate them in nonobtrusive areas, and design to appear natural to the greatest extent possible. VA-35: Revegetate any side slopes of detention and/or stormwater basins, as well as any bioswales, with landscaping other than native seeding, such as container planting. These plants must be integral to the other replacement plantings in the corridor. VA-36: To deter graffiti, include textures on walls and surfaces to a minimum depth of 1.25 inches and/or anti-graffiti coatings on all walls, barriers, and bridges. Where feasible, include vine plantings on walls to also deter graffiti. VA-37: For all new or relocated light fixtures and other sources of glare, provide shielded fixtures that prevent light trespass onto adjacent properties. VA-38: For portions of the freeway designated as a "Classified Landscaped Freeway" and where landscaping/trees will be removed, every effort will be made to keep this designation by creating areas for replacement landscaping.
Cultural Resources	No impact.	Permanent The project avoids all historic and archaeological resources within the project area of potential effects (APE). While there is potential for indirect effects on the Mill Creek Zanja and El Carmelo/The Peppers, the impacts from modifying the existing I-10 corridor are minimal. Temporary No impacts.	Permanent The project only has the potential to contribute to a permanent effect on Euclid Avenue/State Route (SR) 83, because it is the only property being directly affected for Alternative 3. The proposed project would require modification of the medians, curbs, and/or mature vegetation that are character-defining features of Euclid Avenue/SR-83. In addition, the Euclid Avenue/I-10 Overcrossing (Bridge No. 54 0445) would be replaced. While this bridge is not a character-defining feature of Euclid Avenue/SR-83, care must be given to the design and aesthetics of the replacement structure to ensure that the new structure does not impact the setting of the corridor. However, Alternative 3 would have No Adverse Effect with Non-Standard Conditions on Euclid Avenue/SR-83. Temporary The temporary construction improvements with Non-Standard Conditions would not adversely affect a historic property as defined in 36 Code of Federal Regulations (CFR) 800.5(a)(2).	CUL-1: Design of Replacement Euclid Avenue/I-10 Structure The deck of the replacement structure will be landscaped in a manner consistent with the historic landscape design of Euclid Avenue to the north and the south of this bridge. The existing median width will be maintained to the extent feasible. Single or double tree line(s) will be recreated as feasible. Cobblestone curbs will be recreated on raised median planters. Raised median walls with shallow-rooted trees depicted in Figure 5 in Appendix G of the Finding of No Adverse Effect (FNAE) will be constructed. The replacement structure shall be reviewed by the Caltrans Professional Qualified Staff (PQS) Architectural Historian to ensure compliance with Condition 1 during the PS&E phase. If the minimum criteria established herein are not met, State Historic Preservation Officer (SHPO) consultation will be required. CUL-2: Contributing Tree Replacement (Euclid Avenue) All contributing trees required to be removed from the Euclid Avenue parkway and median will be replaced within the parkway or median. Trees to be removed and replaced are depicted in Figure 5 in Appendix G of the FNAE. Any additional contributing trees that are subsequently identified for removal during planning or construction will also be subject to this condition. Replacement locations of contributing trees will be decided on by the Caltrans PQS Architectural Historian in consultation with the Caltrans Landscape Design, SANBAG, and the appropriate city (Ontario or Upland). The Euclid Avenue median between 6 th Street and the new I-10 bridge structure, where most of the contributing trees are to be removed, will be replanted with a double row of California pepper trees to recreate the historic planting scheme of the median. Where space does not allow for a double row of trees (i.e., areas of reduced median width), a single row of trees will be planted. Decisions regarding the planting of median trees will be overseen by the Caltrans PQS Architectural Historian in consultation with

Table S-1 Project Impact Summary Table

Resource	Alternative 1	Alternative 2	Alternative 3	
Impacts	(No Build)	(One HOV Lane in Each Direction)	(Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
Hydrology and Floodplains	No impact.	Alternative 2 would impact several channels and drains and their floodplain at varying degrees; however, the proposed freeway widening would have very small impact on: • Life and property; • Interruption or termination of a transportation facility; or • Natural and beneficial floodplain values. Alternative 2 is anticipated to result in 13 transverse and 5 longitudinal floodplain encroachments. Potential Floodplain Encroachment: • California Commerce Center Storm Drain • East Etiwanda Creek • San Sevaine Channel • I-10 Channel • Collon Southwest Storm Drain	Alternative 3 would impact several channels and drains and their floodplain at varying degrees; however, the proposed freeway widening would have very small impact on: Life and property; Interruption or termination of a transportation facility; or Natural and beneficial floodplain values. Alternative 3 is anticipated to result in 13 transverse and 5 longitudinal floodplain encroachments. Potential Floodplain Encroachment: West Cucamonga Creek Cucamonga Creek/Deer Creek Lower Deer Creek California Commerce Center Storm Drain East Etiwanda Creek San Sevaine Channel	Rehabilitation. CuL-5: Signs (Euclid Avenue) National Register signs will be installed on Euclid Avenue. The Euclid Avenue Historic District rock monument sign will be installed to match other historic districts. CuL-6: Monitoring A cultural resources monitoring plan will be developed by SANBAG and approved by the Caltrans PQS Architectural Historian prior to commencement of any construction-related activities at Euclid Avenue. The monitoring plan will, at a minimum, specify timeframes, locations, and durations of monitoring and specify requirements for monitoring logs. Upon completion of all construction related to the conditions in the FNAE, a Monitoring Report will be prepared to document that all conditions have been met. The monitoring report will be approved by the Caltrans PQS Architectural Historian and submitted to the SHPO to document compliance with the FNAE conditions. Construction plans and activities in the vicinity of the remaining historic properties in the APE (the Mill Creek Zanja, 1055 E. Highland Avenue, and The Peppers/El Carmelo) will be spot monitored by the Caltrans PQS. CuL-7: Designate and Enforce ESA (Curtis Homestead) in Accordance with the ESA Action Plan. Establishment of the ESA shall be executed by a qualified archaeologist. Enforcement of the ESA shall be executed by a qualified archaeologist. CuL-8: If human remains and associated artifacts are encountered during ground-disturbing activities, then the provisions of Public law 101-601, Section 5097.98 and .99 of the PRC, and Section 7050 of the Health and Safety Code, will be followed. Any further mitigation measures required shall be developed in accordance with the requirements of 36 CFR 800.13, the post review discovery provision of the regulations implementing Section 106 of the NHPA. HYD-1: Provide positive drainage during construction and refrain from filling designated floodplains. HYD-2: Implement recommended BMPs as identified in the Storm Water Data Report (SWDR). HYD-3: Include erosion control and water
		 11th Street Storm Drain Warm Creek Santa Ana River (SAR) San Timoteo Creek Mission Zanja The Zanja 	 Colton Southwest Storm Drain 11th Street Storm Drain Warm Creek SAR San Timoteo Creek Mission Zanja 	

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
Water Quality and Stormwater Runoff	Currently, there are no treatment BMPs within the project corridor; this would remain the case.	Permanent Alternative 2 would increase the impervious surface area by 51 acres and potentially increase stormwater runoff from construction. Temporary During construction, the total disturbed soil area is estimated to be 346 acres for Alternative 2.	Permanent Alternative 3 would increase the impervious surface area by 140 acres and potentially increase stormwater runoff from construction. Temporary During construction, the total disturbed soil area is estimated to be 661 acres for Alternative 3.	WQ-1: Implement Stormwater Best Management Practices (BMPs). The project would be required to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for Construction Activities, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002, as well as implementation of the BMPs specified in the Caltrans SWMP. WQ-2: Discharge of Construction Water. If dewatering is expected for the Preferred Alternative, the Contractor shall fully conform to the requirements specified in the Los Angeles Regional Water Quality Control Board (RWQCB) Order R4-2013-0095 (NPDES No. CAG994004) (if dewatering occurs in Los Angeles) or the Santa Ana RWQCB's dewatering permit Order R8-2005-0041 (NPDES No. CAG998001). WQ-3: Implement Treatment BMPs. The project would be required to conform to the requirements of the Caltrans Statewide NPDES Storm Water Permit, Order No. 2012-0011-DWQ, NPDES No. CAS000003, adopted by the State Water Resources Control Board (SWRCB) on September 19, 2012, and any subsequent permit in effect at the time of project operation. WQ-4: Comply with Local Jurisdiction Requirements. The project would be subject to Los Angeles County and San Bernardino County conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution associated with street and road construction, as appropriate. These conditions and approvals are referenced in the Waste Discharge Requirements (WDRs) associated with the Municipal Separate Storm Sewer System (MS4) permits per Order No. R4-2012-0175 for the coastal watersheds of Los Angeles County (NPDES Permit No. CAS004001) and Order No. R8-2010-0036 (NPDES No. CAS618036) for the County of San Bernardino and the incorporated cities of the County of San Bernardino. WQ-5: Implement Erosion Control Plan. Slopes steeper than 4:1 require an Erosion Control Plan that is approved by the Caltrans District Landscape Architect.
Geology/Soils/ Seismic/ Topography	No impact.	Liquefaction The area close to the SAR has a shallow groundwater table. Several structures are located in the shallow groundwater area, including Mt. Vernon Avenue OC, Warm Creek Bridge, Santa Ana River Bridge, I-10/I-215 Interchange, Waterman Avenue Undercrossing (UC), and San Timoteo Creek Bridge. Liquefaction potential at these bridge sites is expected to range from medium to high, and seismically induced settlement could be up to 3 inches. The liquefaction potential and resulting seismically induced settlement should be confirmed during the PS&E phase using site-specific subsurface data. Areas with a potential for high liquefaction during a seismic event would be designed to meet current design standards for both Caltrans and the cities adjacent to the project corridor to minimize liquefaction hazards. The current risks associated with liquefaction at the interchange area would remain the same as existing conditions if any of the proposed build alternatives were constructed; therefore, the proposed build alternatives would not have the potential to introduce new liquefaction-related hazards. Seismicity	Liquefaction The area close to the SAR has a shallow groundwater table. Several structures are located in the shallow groundwater area, including Mt. Vernon Avenue OC, Warm Creek Bridge, Santa Ana River Bridge, I-10/I-215 Interchange, Waterman Avenue UC, and San Timoteo Creek Bridge. Liquefaction potential at these bridge sites is expected to range from medium to high, and seismically induced settlement could be up to 3 inches. The liquefaction potential and resulting seismically induced settlement should be confirmed during the PS&E phase using site-specific subsurface data. Areas with a potential for high liquefaction during a seismic event would be designed to meet current design standards for both Caltrans and the cities adjacent to the project corridor to minimize liquefaction hazards. The current risks associated with liquefaction at the interchange area would remain the same as existing conditions if any of the proposed build alternatives were constructed; therefore, the proposed build alternatives were constructed; therefore, the proposed build alternatives would not have the potential to introduce new liquefaction-related hazards. Seismicity Although the proposed project site is located	GEO-1: In accordance with standard Caltrans requirements, detailed geotechnical studies shall be conducted during the project's future PS&E phase. If results of these studies find high potential for seismic slope instability or lateral spreading, additional measures will be incorporated for new structures associated with the project, including bridges, embankments, and retaining walls. Resulting recommendations from the detailed studies shall be incorporated into the project plans during the PS&E phase to address seismic safety, liquefaction, and load-bearing concerns present in the project area. GEO-2: Selection of earth-retaining system types will be based on consideration of foundation bearing capacity, anticipated settlement and ability of the system to tolerate settlements, overall slope stability, constructability, and cost. GEO-3: Corrosion mitigation for steel and concrete structures will generally follow Caltrans Corrosion Guidelines (2003 or latest). The latest Caltrans Highway Design Manual (HDM) (Section 855) provides corrosion requirements for roadway structures (e.g., culverts, signs) for a 50-year design life. GEO-4: The project engineer shall request a Materials Report in the early stage of PS&E. The report shall include the results of field tests and sampling for corrosion for use in recommending culvert materials and concrete mix designs. Sampling and testing shall be performed in accordance with Caltrans Corrosion Guidelines (2003 or latest). GEO-5: If corrosive soils are found near foundations of bridges and walls, reinforced concrete (including piles) requires corrosion mitigation in accordance with Bridge Design Specifications, Article 8.22; when steel piles are specified, sacrificial corrosion allowance is required per Caltrans Corrosion Guidelines. GEO-6: Earthwork shall be conducted in accordance with Sections 6 and 19 of the latest Caltrans Standard Specifications: • Consideration of existing utilities in the area must be incorporated into project plans. • In areas where compact

Table S-1 Project Impact Summary Table

Resource Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
	Although the proposed project site is located in seismically active southern California, it is within an existing transportation corridor. The project would be designed to meet current corridor cities' and Caltrans' design standards to minimize geologic and seismic hazards. No structures would be constructed that would increase the current risk of loss, injury, or death as a result of ground shaking or other seismically induced effects. The proposed project would not increase the risk of exposing people or structures to potential substantial adverse effects because of seismic activities or seismic-related ground failure beyond the existing level already present with the current freeway configuration. Embankment Settlement The project involves constructing new earthen embankments for median lanes and widening existing embankments to create new alignments and configurations. The proposed embankments are anticipated to be up to approximately 30 feet high. Because the subsurface soils are predominantly granular, the soils are not expected to undergo large consolidation settlement (i.e., settlement over long periods of time); however, the soils can undergo "immediate" elastic settlement, which usually occurs during earthwork activities and shortly thereafter. Earth Retaining Structures Cantilevered retaining walls are proposed at various locations throughout the project, including along the on- and off-ramps. Retaining walls are proposed to be standard Caltrans retaining walls; however, other types will be investigated during the PS&E phase. Based on the subsurface information shown on the available as-built Log of Test Boring (LOTB) sheets, spread footings are suitable for supporting standard Caltrans retaining walls with heights equal to or less than 20 feet. Pile foundation might be required to support taller retaining walls. Some amount of remedial earthwork below the proposed spreading footings to remove loose near-surface soils should be anticipated; remedial overexcavations will most likely be less than	in seismically active southern California, it is within an existing transportation corridor. The project would be designed to meet current corridor cities' and Caltrans' design standards to minimize geologic and seismic hazards. No structures would be constructed that would increase the current risk of loss, injury, or death as a result of ground shaking or other seismically induced effects. The proposed project would not increase the risk of exposing people or structures to potential substantial adverse effects because of seismic activities or seismic-related ground failure beyond the existing level already present with the current freeway configuration. Embankment Settlement The project involves constructing new earthen embankments for median lanes and widening existing embankments to create new alignments and configurations. The proposed embankments are anticipated to be up to approximately 30 feet high. Because the subsurface soils are predominantly granular, the soils are not expected to undergo large consolidation settlement (i.e., settlement over long periods of time); however, the soils can undergo "immediate" elastic settlement, which usually occurs during earthwork activities and shortly thereafter. Earth Retaining Structures Cantilevered retaining walls are proposed at various locations throughout the project, including along the on- and off-ramps. Retaining walls are proposed to be standard Caltrans retaining walls; however, other types will be investigated during the PS&E phase. Based on the subsurface information shown on the available as-built LOTB sheets, spread footings are suitable for supporting standard Caltrans retaining walls with heights equal to or less than 20 feet. Pile foundation might be required to support taller retaining walls. Some amount of remedial earthwork below the proposed spreading footings to remove loose near-surface soils should be anticipated; remedial overexcavations will most likely be less than 3 feet. Ground Rupture Based on the detailed geophysical invest	Overexcavations shall be observed by qualified geotechnical personnel to verify that firm and unyielding bottoms are exposed. Overexcavated areas shall be cleaned of loose soils and debris and should be observed to be firm and unyielding before receiving fill. These onsite materials can be excavated using conventional heavy-duty earth-moving equipment, and the materials are not expected to pose a rippability problem. GEO-7: Monitoring during construction shall be done by a licensed geologist and engineer to ensure that the construction site was properly characterized by the geotechnical studies and that the project design is in compliance with geotechnical and seismic safety standards and practices included in the PS&E package. GEO-8: Standard Caltrans BMPs shall be followed to minimize soil loss and erosino during construction. To minimize potential soil erosion, all finish slopes shall be planted as soon as practical after grading. GEO-9: The liquefaction potential and resulting seismically induced settlement of structures located in the shallow ground area, including Mt. Vernon Avenue OC, Warm Creek Bridge, Shall be contimined during the PS&E phase using site-specific subsurface data. GEO-10: Before ground-disturbance activities in an area where hazardous or toxic materials are present, a specialist in hazardous waste or materials will be consulted for proper handling and disposal. GEO-11: Exploratory borings throughout the project area shall be performed during the PS&E phase of the project to investigate site-specific soils and conditions and to collect samples of subsurface soils for laboratory testing. GEO-11: Exploratory borings throughout the project area shall be performed during the PS&E phase of the project to investigate site-specific soils and conditions and to collect samples of subsurdance soils for laboratory testing. GEO-11: Exploratory borings throughout the project area shall be performed during the PS&E phase of the project area for high second project of the project area for high s

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
		Ground Rupture Based on the detailed geophysical investigations conducted at the Highland Avenue structure, it was concluded that although there were some possible geophysical anomalies at the Highland Avenue site, these features did not project through the overcrossing or its abutments, so no further investigations were done at the site. Geophysical data and trenching study at the Warm Creek site indicated that the fault projects well south of the Warm Creek Bridge; therefore, it was concluded that there is little potential for fault rupture at the Warm Creek Bridge.	geophysical anomalies at the Highland Avenue site, these features did not project through the overcrossing or its abutments, so no further investigations were done at the site. Geophysical data and trenching study at the Warm Creek site indicated that the fault projects well south of the Warm Creek Bridge; therefore, it was concluded that there is little potential for fault rupture at the Warm Creek Bridge.	
Paleontology	No impact.	Permanent Alternative 2 has the potential to impact paleontological resources during construction; however, because fossils are located subsurface, there is no way to know the full extent of the effect of the two build alternatives on fossil resources until excavation is underway. The fact that no fossils were observed during the paleontological reconnaissance is typical because most fossils are subsurface. Existing fossil localities nearby in the same rock units present within the project study area have produced significant vertebrate paleontological resources. On this basis, the San Timoteo Formation has high sensitivity or potential to produce significant fossils. This sensitivity increases with increasing depth below the ground surface.	Alternative 3 has the potential to impact significant paleontological resources during construction; however, because fossils are located subsurface, there is no way to know the full extent of the effect of the two build alternatives on fossil resources until excavation is underway. The fact that no fossils were observed during the paleontological reconnaissance is typical because most fossils are subsurface. Existing fossil localities nearby in the same rock units present within the project study area have produced significant vertebrate paleontological resources. On this basis, the San Timoteo Formation has high sensitivity or potential to produce significant fossils. This sensitivity increases with increasing depth below the ground surface.	 PA-1: The Paleontological Mitigation Plan (PMP) will be prepared, by a qualified paleontologist, prior to completion of the PS&E phase of this project once specific information about excavation locations and depth is available and monitoring efforts can be properly estimated. The PMP will detail the measures to be implemented and shall include, at a minimum, the following elements: Required 1-hour preconstruction paleontological awareness training for earth-moving personnel, including documentation of training, such as sign-in sheets and hardhat stickers, to establish communications protocols between construction personnel and the Principal Paleontologist. A signed repository agreement with a qualified institution to establish a curation process in the event of sample collection. Monitoring, by a Principal Paleontologist, of Pleistocene Epoch during excavation. Field and laboratory methods that meet the curation requirements of the repository will be implemented for monitoring, reporting, collection, and curation of collected specimens. All elements of the PMP will follow the PMP format published in the Caltrans Standard Environmental Reference (Caltrans, 2003).
Hazardous Waste/ Materials	No impact.	Eleven (11) potential recognized environmental condition (REC) parcels have been preliminarily identified for acquisition in the Alternative 2 project area. All acquisition properties identified for Alternative 2 are partial acquisitions. The potential environmental concerns for Alternative 2 are described below: Nine of the 11 properties are located within 25 feet of rail lines and should be sampled for pesticides containing arsenic if Alternative 2 is selected. One parcel contains at least one aboveground storage tank (AST), which may or may not be within the portion identified for acquisition.	Fifty-three (53) potential REC parcels have been preliminarily identified for acquisition in the Alternative 3 project area; 38 of these parcels are partial acquisitions and 15 are full acquisitions. The potential environmental concerns for Alternative 3 are described below: • Thirty-five (35) parcels contain structures to be demolished and should be sampled for asbestos-containing materials (ACM) and lead-based paint (LBP). • Two parcels contain at least one AST, which may or may not be within the portion identified for acquisition. • Nine identified parcels contain at least one UST on the property.	HAZ-1: During the project approval/environmental document (PA/ED) phase, surveys for hazardous building materials, including ACM and LBP, will be conducted for the residential and commercial structures and bridge structures that will be removed as part of the proposed project. HAZ-2: During the PA/ED phase, parcels identified for partial or full acquisition will be surveyed to determine whether any USTs, ASTs, or arsenic-contaminated soils are located within an area identified for acquisition. If any hazardous materials are located within the area to be acquired, proper removal procedures in accordance with standard provisions and requirements would minimize any direct or indirect adverse temporary impacts. HAZ-3: During PS&E and prior to any ground-disturbance activities, SANBAG's Resident Engineer will require the contractor to conduct inspections for potential polychlorinated biphenyls (PCBs) in utility pole-mounted transformers that will be relocated or removed as part of the project. SANBAG's Resident Engineer will require the design-build contractor to consider leaking transformers a PCB hazard unless tested and confirmed otherwise, and to handle them accordingly. HAZ-4: Prior to construction, testing of yellow traffic stripes and pavement marking material shall be performed by SANBAG. HAZ-5: Prior to PS&E, sampling for ADL shall be conducted by SANBAG within the unpaved shoulders of the I-10

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Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
		One parcel identified for partial acquisition has at least one underground storage tank (UST) on the property. If Alternative 2 is selected, these 11 parcels will need to be surveyed to determine whether any USTs, ASTs, or arsenic-contaminated soils are located within an area identified for acquisition. If any hazardous materials are located within the area to be acquired, proper removal procedures in accordance with standard provisions and requirements would minimize any direct or indirect adverse temporary impacts.	If Alternative 3 is selected, all parcels identified for full or partial acquisition will need to be surveyed to determine whether any USTs, ASTs, or other contaminated materials, such as ACM or LBP, are located within an area identified for acquisition. If any hazardous materials are located within the area to be acquired, proper removal procedures in accordance with standard provisions and requirements would minimize any direct or indirect adverse temporary impacts.	 Corridor Project (I-10 CP). A Site Assessment for ADL will be prepared and will include the following: A detailed description of where the ADL is located on the project site, including the length, width, and depth of the contamination; A determination of the Caltrans "soil type" (X, Y1, Y2, Z2, or Z3) that is found during the survey; A discussion of how the soil will be reused on the project in accordance with the Department of Toxic Substances Control (DTSC)-issued variance or if the soil will require offsite disposal; and A discussion of the Caltrans Special Provisions required to be followed. HAZ-6: Several full and partial acquisition parcels that have or have had USTs or ASTs located on them will be surveyed to determine whether any USTs or ASTs are located within an area identified for acquisition. If USTs are located within the area to be acquired, proper removal procedures in accordance with Section 2672 (for USTs) of Title 23 of the CCR as implemented by the local RWQCB will be followed. Minimum requirements for AST removal include removal of tank contents (including material in associated piping, rinsate, and decontamination products) to be managed as hazardous waste; and tank atmosphere to be rendered vapor free (for tanks that held flammable/combustible products). If the USTs or ASTs contain hazardous materials, soils surrounding the tanks will be collected and analyzed for said hazardous materials after removal of the tanks to determine proper handling and disposal requirements. HAZ-7: Herbicides and pesticides may be present along the project location where historic and current agricultural activities occur. Prior to completion of the PS&E phase, soil samples will be collected and analyzed for herbicides and pesticides to determine proper handling and disposal requirements. HAZ-9: If signs of potential impacts (e.g., odors, discolored soil) are observed during construction activity, construction shall cease and Caltrans' Unkno
Air Quality	Congestion within the project corridor would continue to increase and contribute to decreased air quality within the project corridor and region.	Permanent Alternative 2 would result in negligible changes in regional emissions for VOC, NOx, and CO (i.e., 1 to 2 percent decrease in 2025 and 2 to 4 percent increase in 2045) from no build conditions. The decrease in regional emissions for PM ₁₀ and PM _{2.5} would be 7 and 4 percent in 2025, and 1 and 5 percent in 2045, respectively. The change in no build to build mobile source air toxic (MSAT) emissions ranges from a decrease of 7 percent to an increase of 8 percent in 2025, and 2045 emissions range from 3 to 8 percent increases. Alternative 2 would result in a diesel particulate matter change of 5 percent in 2025 and 8 percent in 2045. Temporary Construction of the proposed project is anticipated to last 42 months. As a result, project construction would not last more than 5 years and is considered temporary. Construction emissions would be associated with the following stationary or mobile-powered onsite construction equipment:	Permanent Alternative 3 would increase regional VOC, NOx, and CO emissions by approximately 9 to 12 percent in 2025 and 2045 from no build conditions. The increase in regional PM ₁₀ emissions in 2025 and 2045 would be 5 and 4 percent, respectively. PM2.5 emissions would grow by 1 percent in years 2025 and 2045. The change in no build to build MSAT emissions ranges from an increase of 7 to 14 percent in 2025 and an increase of 8 to 14 percent in 2045. Alternative 3 would result in a diesel particulate matter change of 8 percent in 2025 and 7 percent in 2045. Temporary Construction of the proposed project is anticipated to last 60 months. As a result, project construction would not last more than 5 years and is considered temporary. Construction emissions would be associated with the following stationary or mobile- powered onsite construction equipment: Trucks Tractors Signal Boards	AQ-1: The construction contractor must comply with the Caltrans Standard Specifications in Section 14-9 (2015). AQ-2: Section 14-9-02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances. AQ-3: Section 14-9.03 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are described in Section 18. AQ-4: The construction contractor must comply with South Coast Air Quality Management District (SCAQMD) Rule 403 (Fugitive Dust). Water or dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions generally must meet a "no visible dust" criterion either at the point of emissions or at the ROW line depending on local regulations. AQ-5: Soil binder will be spread on any unpaved roads used for construction purposes and on all project construction parking areas. AQ-6: Trucks will be washed as they leave the ROW as necessary to control fugitive dust emissions. AQ-7: A dust control plan will be developed documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts to existing communities. AQ-8: Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly. AQ-9: Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used. AQ-10: All transported loads of soils and wet materials will be covered before transport, or adequate freeboard (i.e., space from the top of the material to the top of the truck) will be provided to minimize emission of dust (i.e., particulate matter [PM]) during transportation. AQ-10: All transported loads of

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
		 Trucks Tractors Signal Boards Excavators Backhoes Concrete Saws Crushing and/or Processing Equipment Graders Trenchers Pavers Other Paving Equipment 	Excavators Backhoes Concrete Saws Crushing and/or Processing Equipment Graders Trenchers Pavers Other Paving Equipment	in the area. Be aware that certain methods of mulch placement, such as straw blowing, may themselves cause dust and visible emission issues and may need to use controls such as dampened straw. Hydroseeding may be used as an alternative to mulch. AQ-13: Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations (CCR) Title 17, Section 93114. AQ-14: ESAs or their equivalent will be established within 1,000 feet of sensitive air receptors. Within these areas, construction activities involving the extended idling of diesel equipment or vehicles will be prophibited, to the extent feasible. AQ-15: To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times. AQ-16: Under the California Air Resources Board's (ARB) idling emissions rule, 2008 and newer model year heavyduty diesel engines will be equipped with a nonprogrammable engine shutdown system that automatically shuts down the engine after 5 minutes of idling, or optionally meet a stringent nitrogen oxides (NOx) idling emission standard. This rule applies to diesel-fueled commercial motor vehicles that operate in California with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. AQ-17: To the extent feasible, all construction signal/message boards shall be solar powered. AQ-18: To the extent feasible, electricity shall be obtained from power poles rather than temporary diesel or gasoline generators. AQ-19: To the extent feasible, commuter incentives and ITS programs, such as traffic management centers or incident management systems, will be incorporated per FHWA's MSAT guidance. AQ-20: If Alternative 3 is selected, congestion pricing per FHWA's MSAT guidance will be implemented as a means to counter the effects of MSAT emissions. AQ-21: Implemen
Noise	Noise conditions within the corridor are projected to experience a 1- to 4-decibel (dB) increase under the 2045 no-build conditions.	Permanent Increases in operational noise at all receptors are considered minor with implementation of the recommended soundwalls summarized below. Project future noise conditions, when compared to the future no-build noise conditions, generally increase or decrease slightly compared to the future no-build noise condition. With incorporation of the abatement, maximum changes in future build noise range from a 3-dB increase to a 12-dB decrease. Recommended Soundwalls: 17 New Temporary Construction noise varies greatly depending on the construction process, type, and condition of the equipment used, and layout of the construction site.	Permanent Increases in operational noise at all receptors are considered minor with implementation of the recommended soundwalls summarized below. Project future noise conditions, when compared to the future no-build noise conditions, generally increase or decrease slightly compared to the future no-build noise condition. With incorporation of the abatement, maximum changes in future build noise range from a 4-dB increase to a 10-dB decrease. Recommended Soundwalls: 27 New (1 Gap Closure) 19 Replace In-kind Temporary Construction noise varies greatly depending on the construction process, type, and condition of the equipment used, and layout of	 N-1: Noise barriers presented in Appendix L, Sections L3 and L4, will be considered for noise abatement. N-2: Sound control will conform to the provisions in Section 14-8.02, "Noise Control," of the Standard Specifications. N-3: The following are control measures that will be implemented to minimize noise disturbances at sensitive areas during construction: All equipment shall have sound-control devices no less effective than those provided on the original equipment. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine should be operated on the jobsite without an appropriate muffler. Construction methods or equipment that will provide the lowest level of noise impact (e.g., avoid impact pile driving near residences and consider alternative methods that are also suitable for the soil condition) will be used. Idling equipment shall be turned off. Truck loading, unloading, and hauling operations shall be restricted through residential neighborhoods to the greatest possible extent. Construction activities shall be coordinated to build recommended permanent soundwalls during the first phase of construction to protect sensitive receivers from subsequent construction noise, dust, light, glare, and other impacts, to the extent feasible. Temporary noise barriers shall be used and relocated, as needed. Noise barriers can be made of heavy plywood, moveable insulated sound blankets, or other best available control techniques.

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Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
		Projections of potential construction noise levels may vary from actual noise experienced during construction due to these factors. In general, construction activities conducted during daytime hours would have a lesser impact on sensitive receptors than nighttime construction; however, nighttime construction is expected to be necessary to avoid unacceptable disruptions to traffic during daytime hours.	the construction site. Projections of potential construction noise levels may vary from actual noise experienced during construction due to these factors. In general, construction activities conducted during daytime hours would have a lesser impact on sensitive receptors than nighttime construction; however, nighttime construction is expected to be necessary to avoid unacceptable disruptions to traffic during daytime hours.	 Newer equipment with improved noise muffling shall be used, and all equipment items shall have the manufacturers' recommended noise abatement measures (e.g., mufflers, engine covers, and engine vibration isolators) intact and operational. All construction equipment shall be inspected at periodic intervals to ensure proper maintenance and presence of noise-control devices (e.g., mufflers and shrouding). Construction activities shall be minimized in residential areas during evening, nighttime, weekend, and holiday periods. Coordination with each city shall occur before construction can be performed in noise sensitive areas. Construction lay-down or staging areas shall be selected in industrially zoned districts. If industrially zoned areas are not available, commercially zoned areas may be used, or locations that are at least 100 feet from any noise-sensitive land use (e.g., residences). Contractor shall prepare a Noise and Vibration Monitoring and Mitigation Plan by a qualified Acoustical Engineer and submit it for approval. The Plan must outline noise and vibration monitoring procedures at predetermined noise and vibration sensitive sites, as well as historic properties. The Plan also must include calculated noise and vibration levels for various construction phases and mitigation measures that may be needed to meet the project specifications. The Contractor shall not start any construction work or operate any noise-generating construction equipment at the construction site before approval of the Plan. The Plan will be updated every 3 months or sooner if there are any changes. N-4: The following are some procedures that will be used to minimize the potential impacts from construction vibration: Hours of vibration-intensive activities, such as vibratory rollers, will be restricted to minimize adverse impacts to the residents (e.g., weekdays during daytime hours only when as many residents as possible are away from home). The owner of a building close
Energy	No impact.	Energy impacts would be minimized with incorporation of energy conservation measures. Energy conservation measures include, but are not limited to, the following: • Selecting energy-efficient project features (e.g., lighting, pavement surface), using energy-efficient design (i.e., reduced grades, decrease in out-of-direction travel, traffic flow improvements), including ramp metering, auxiliary lanes, and other Transportation System Management (TSM)/ Transportation Demand Management (TDM) measures, as well as bicycle and pedestrian facilities, to further offset increased fuel consumption associated with the projected increase in vehicle miles traveled (VMT).	Energy impacts would be minimized with incorporation of energy conservation measures. Energy conservation measures include, but are not limited to, the following: • Selecting energy-efficient project features (e.g., lighting, pavement surface), using energy-efficient design (i.e., reduced grades, decrease in out-of-direction travel, traffic flow improvements), including ramp metering, auxiliary lanes, and other TSM/TDM measures, as well as bicycle and pedestrian facilities, to further offset increased fuel consumption associated with the projected increase in VMT.	No measures required.
Natural Communities	No impact.	Permanent The area of permanent impact of Riversidean sage scrub (RSS) habitat was calculated to be 0.23 acre for Alternative 2. Approximately 35 acres of vegetation communities would be permanently affected by Alternative 2. Temporary There would be temporary impacts to	Permanent The area of permanent impact of RSS habitat was calculated to be 0.25 acre for Alternative 3. Approximately 150 acres of vegetation communities would be permanently affected by Alternative 3. Temporary There would be temporary impacts to riparian plant communities, including southern willow	NC-1: During PS&E, SANBAG's Design Engineer will coordinate with the qualified biologist to delineate all ESAs within the project footprint and immediately surrounding areas in the project specifications. ESAs include riparian vegetation communities and RSS vegetation that are not identified as temporarily or permanently impacted in the environmental document. Prior to clearing vegetation or construction within or adjacent to ESAs, the Contractor will install highly visible barriers (e.g., orange construction fencing) adjacent to the project footprint to designate ESAs to be preserved in place. No grading or fill activity of any type will be permitted within these ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby ESAs. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESAs. Silt fence barriers will be installed at the ESA boundaries to prevent accidental deposition of

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
		riparian plant communities, including southern willow scrub and mule fat scrub. In addition, 2.85 acres of RSS habitat would be temporarily affected for Alternative 2.	scrub and mule fat scrub. In addition, 2.85 acres of RSS habitat would be temporarily affected for Alternative 3.	fill material in areas where vegetation is adjacent to planned grading activities. A qualified biologist will supervise the placement of ESA fencing. NC-2: Prior to the completion of construction, the Resident Engineer will require the Contractor to hydroseed all temporarily impacted vegetation communities with appropriate native plant species that are approved by the Caltrans District 8 Biologist. Plant species used in the seeding should be similar to what was present in each area prior to the impact unless prohibited by Measures VA-17, VA-34, and VA-35.
Wetlands and Other Waters	No impact.	Permanent Based on preliminary engineering, Alternative 2 would result in 0.07 acre of permanent impacts to CDFW and RWQCB jurisdiction. Temporary Based on preliminary engineering, Alternative 2 would result in 4.56 acre of temporary impacts to United States Army Corps of Engineers (USACE) jurisdictional areas. Alternative 2 would result in 8.45 acres of temporary impacts to waters pursuant to CDFW and RWQCB jurisdiction.	Permanent Based on preliminary engineering, Alternative 3 would result in 0.09 acre of permanent impacts to waters pursuant to CDFW and RWQCB jurisdiction. Temporary Based on preliminary engineering, Alternative 3 would result in 20.41 acres of temporary impacts to USACE jurisdictional areas. Alternative 3 would result in 27.40 acres of temporary impacts to waters pursuant to CDFW and RWQCB jurisdiction.	WET-1: During PS&E, the Design Engineer will coordinate with the qualified biologist to delineate all ESAs within the project footprint and immediately surrounding areas in the project specifications. ESAs will include the Santa Ana River, Warm Creek Channel, and other Waters of the U.S. and Waters of the State that are not identified as temporarily or permanently impacted in the environmental document. Prior to clearing vegetation or construction within or adjacent to ESAs, the Contractor will be required to install highly visible barriers (e.g., crange construction fencing) adjacent to the project footprint to designate ESAs to be preserved in place. No grading or fill activity of any type will be permitted within these ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby ESAs. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESAs. Silf tence barriers will be installed at the ESA boundaries to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities. A qualified biologist will supervise the placement of ESA fencing. WET-2: A SWPPP will be prepared and implemented for the project, which will include all applicable water pollution control measures for the project. In addition, construction activities within the Santa Ana River will be designed and conducted to maintain downstream flow conditions. All construction activities will be effectively isolated from water flows to the greatest extent feasible. This may be accomplished by working in the dry season or dewatering the work area in the west season. When work in standing or flowing water is required, structures for isolating the in-water work area and/or diverting the water flow must not be removed until all disturbed areas are cleaned and stabilized. The diverted water flow must not be contaminated by con
Plant Species	No impact.	No impact.	No impact.	No measures required.

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
Animal Species	No impact.	Permanent Burrowing Owl Under Alternative 2, there would be 11.68 acres of permanent impacts to potential BUOW habitat. The build alternatives could result in indirect permanent effects to burrowing owls (BUOWs) through the loss of	Permanent Burrowing Owl Under Alternative 3, there would be 39.43 acres of permanent impacts to potential BUOW habitat. The build alternatives could result in indirect permanent effects to BUOWs through the loss of potential habitat.	Nesting Birds and Swallow Species AS-1: To avoid effects to nesting birds, SANBAG's Resident Engineer will require the Contractor to conduct any native or exotic vegetation removal or tree-trimming activities outside of the nesting bird season (i.e., February 15 through August 31). If vegetation clearing or the start of construction in a previously undisturbed area is necessary during the nesting season, SANBAG's Resident Engineer will require the Contractor to have a qualified biologist conduct a preconstruction survey within 300 feet of construction areas no more than 30 days prior to construction at the location to identify the locations of nests, if any. A qualified biologist is one that has previously surveyed for
		potential habitat. Nesting Birds and Swallows Raptors and migratory birds potentially using shrubs within the Biological Study Area (BSA) could be affected by their removal and/or proximity to construction activities. The proposed project would require removal of 374 eucalyptus trees adjacent to I-10. These trees harbor a higher potential to support nesting bird species due to their age and size.	Nesting Birds and Swallows Raptors and migratory birds potentially using shrubs within the BSA could be affected by their removal and/or proximity to construction activities. The proposed project would require removal of,1,148 eucalyptus trees adjacent to I-10. These trees harbor a higher potential to support nesting bird species due to their age and size.	nesting bird species within southern California. Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist around each nest site. The buffer will be clearly marked in the field by construction personnel under guidance of the contractor's qualified biologist, and construction or clearing will not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active. The qualified biologist will monitor the nests on a weekly basis to ensure that construction activities do not disturb or disrupt nesting activities. If the qualified biologist determines that construction activities are disturbing or disrupting nesting activities, then the biologist will notify the Resident Engineer to stop or modify construction to reduce the noise and/or disturbance to the nests. Responses may include, but are not limited to, increasing the size of the exclusionary buffer, curtailing nearby work activities, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest and the construction activities, and/or working in other areas until the young have fledged. If more than 30 days lapses between the preconstruction survey and construction
		Bats The proposed widening of bridges to accommodate the additional EB and WB lanes could result in bat mortality if they are not excluded from the structures prior to the bridge widening activities. Other Special-Status Animal Species Permanent indirect effects to other non-listed special-status species could occur as a result of habitat loss and habitat fragmentation under the proposed build alternatives.	Bats The proposed widening of bridges to accommodate the additional EB and WB lanes could result in bat mortality if they are not excluded from the structures prior to the bridge widening activities. Other Special-Status Animal Species Permanent indirect effects to other non-listed special-status species could occur as a result of habitat loss and habitat fragmentation under the proposed build alternatives.	start date at that location, the survey will be reconducted. AS-2: Because work may occur during the swallow/swift nesting season (March 1 through August 31), swallows will be excluded from structures, if necessary, by a qualified biologist during the nonbreeding season no earlier than 5 days prior to the start of construction. Exclusion structures (e.g., netting and weep hole plugs) will be left in place and maintained through August 31 of each breeding season or until the work is complete. All nest exclusion techniques will be coordinated among the Caltrans District 8 Biologist, SANBAG's Project Manager, SANBAG's Resident Engineer, the Contractor, and CDFW. Burrowing Owl AS-3: Although current known areas of BUOW habitat have been mapped as part of this study, land development or other factors could modify the distribution of habitat within the study corridor. During PS&E, the Design Engineer will coordinate with the Designated Qualified Biologist to reassess potential BUOW habitat within the project footprint or in the immediately surrounding areas and will designate those areas on the project specifications.
		Temporary Temporary effects to several special-status animal species may occur during construction of the build alternatives. Burrowing Owl The build alternatives could result in temporary construction effects to BUOWs through the unavailability of potential habitat during construction. Under Alternative 2, there would be 309.84	Temporary Temporary effects to several special-status animal species may occur during construction of the build alternatives. Burrowing Owl The build alternatives could result in temporary construction effects to BUOWs through the unavailability of potential habitat during construction. Under Alternative 3, there would be 312.47	To ensure that any BUOW that may occupy the site in the future are not affected by construction activities, Resident Engineer will require the Contractor to have preconstruction BUOW surveys conducted by a qualified biologist within 30 days prior to any phase of construction in the areas identified as potential BUOW habitat in the project specifications. These preconstruction surveys are also required to comply with the federal Migratory Bird Treaty Act (MBTA). If any of the preconstruction surveys determine that BUOW are present, SANBAG's Resident Engineer will contact CDFW to identify appropriate avoidance and minimization measures, such as establishing an avoidance buffer and/or work in the vicinity with a biological monitor on hand. SANBAG's Resident Engineer will ensure that any BUOW measures determined to be required based on the results of the preconstruction surveys and the required coordination described above are properly implemented by the Contractor prior to and during construction in areas occupied by BUOW, as identified in the preconstruction surveys.
		acres of temporary impacts to potential BUOW habitat. With implementation of the proposed measures, no substantial effects on BUOWs are anticipated. Nesting Birds and Swallows No raptor nests or other nests in trees or shrubs were observed during biological surveys, indicating that these resources may be less suitable for nesting than other	acres of temporary impacts to potential BUOW habitat. With implementation of the proposed measures, no substantial effects on BUOWs are anticipated. Nesting Birds and Swallows No raptor nests or other nests in trees or shrubs were observed during biological surveys, indicating that these resources may be less suitable for nesting than other	Bats AS-4: Bat Surveys. During PS&E, the Project Manager will coordinate with the designated qualified biologist to identify all areas of potential bat habitat within and immediately adjacent to the project footprint and will designate those areas on the project specifications, including, but not limited to, the following assessment features: bridge type, geographic region, and potential deterrents. Structures currently considered to contain potential bat habitat include bridges that span surface water within the vicinity including, but not limited to, the Warm Creek Channel, Santa Ana River, San Sevaine Channel, Etiwanda Wash, Rialto Channel, Mission Channel, San Timoteo Creek, and Zanja Creek. Ornamental trees that will be impacted where roosting may occur will also be included in the bat surveys. Prior to construction at structures with potential bat habitat as identified in the project specifications, the Project Manager will require the Contractor to have a qualified bat biologist conduct a series of surveys of all potential bat

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
		resources located outside the BSA and farther away from I-10. Temporary effects on swallows would occur during exclusion activities. Depending on the timing of construction, swallow exclusion would not likely be required for more than two nesting seasons. Bats Both build alternatives would have impacts on bridges that are likely used as habitat by bats. Other Special-Status Animal Species Temporary direct impacts to other special-status animal species would include temporary loss of habitat, including trees and shrubs used for nesting and burrows used by ground-dwelling mammals and reptiles. Species that are relatively mobile (e.g., birds and many small mammals and reptiles) would likely disperse into nearby areas. Some mortality of less mobile and burrowing species may occur. Temporary impacts would be limited to the construction period and include increased noise levels and increased human disturbance, and no substantial temporary effects on nesting birds are anticipated. Temporary indirect effects on wildlife beyond the BSA could result from impacts to water quality during construction.	resources located outside the BSA and farther away from I-10. Temporary effects on swallows would occur during exclusion activities. Depending on the timing of construction, swallow exclusion would not likely be required for more than two nesting seasons. Bats Both build alternatives would have impacts on bridges that are likely used as habitat by bats. Other Special-Status Animal Species Temporary direct impacts to other special-status animal species would include temporary loss of habitat, including trees and shrubs used for nesting and burrows used by ground-dwelling mammals and reptiles. Species that are relatively mobile (e.g., birds and many small mammals and reptiles) would likely disperse into nearby areas. Some mortality of less mobile and burrowing species may occur. Temporary impacts would be limited to the construction period and include increased noise levels and increased human disturbance, and no substantial temporary effects on nesting birds are anticipated. Temporary indirect effects on wildlife beyond the BSA could result from impacts to water quality during construction.	habitat areas. Surveys will occur during the bat breeding season (preferably May or June) immediately preceding the start of construction, to assess the potential for the presence of roosts. The qualified bat biologist must have previously conducted bat surveys for the bat species most likely to be present within the study corridor. Bat surveys may be conducted acoustically, using an acoustic bat-call detector such as an Anabat device, or may be conducted visually by inspection of suspected bat roost areas. The qualified bat biologist will also perform preconstruction surveys at structures and ornamental trees potentially containing bats because bat roosts can change seasonally. The surveys will include structure inspection, sampling, exit counts, and acoustic surveys. AS-5: Bat Exclusion. If bat roosts are found, a qualified bat biologist will be onsite for the duration of construction activities that may impact bats. If it is determined that the roosts are present and, based on consultation with CDFW, exclusion is warranted, bats will be excluded from the bridge using CDFW-approved exclusionary devices to the extent necessary to prevent mortality to the colony. Exclusion will take place prior to April 15. Caltrans will confer with CDFW to identify and implement appropriate avoidance and minimization efforts that are satisfactory to CDFW. Examples of exclusion devices are provided in Figures 4-5, 4-6, and 4-7 of the Natural Environment Study (NES). AS-6: Bat Replacement Roosting Structures. If bat exclusion is conducted, replacement roosting habitat may also be required by CDFW to offset and minimize impacts to excluded bats in the project's Lake and Streambed Alteration Agreement. Replacement roosts will be built according to bat house standards (e.g., those endorsed by Bat Conservation International) and will be placed within close proximity to impact areas. Bat houses must be constructed, painted, and placed carefully in specific locations based on the aspect of a given site, the expected temperatures wi
Threatened and Endangered Species	No impact.	Alternative 2 would result in 0.39 acre of temporary impacts and less than 0.01 acre of permanent effects to mapped Santa Ana Sucker Critical Habitat (CH). Alternative 2 would result in 48.10 acres of temporary effects to potentially suitable Delhi Sands Flower-Loving Fly (DSF) habitat. Alternative 2 would result in 0.33 acre of temporary effects to mapped Southwestern Willow Flycatcher CH.	Alternative 3 would result in 0.59 acre of temporary impacts and less than 0.01 acre of permanent effects to mapped Santa Ana Sucker CH. Alternative 3 would result in 48.15 acres of temporary effects to potentially suitable DSF habitat. Alternative 3 would result in 0.59 acre of temporary effects to mapped Southwestern Willow Flycatcher CH.	TE-1: During PS&E, SANBAG's Design Engineer will coordinate with the qualified biologist to delineate all ESAs within the project footprint and immediately surrounding areas in the project specifications. ESAs will include the Santa Ana River, Warm Creek Channel, and DSF potentially suitable habitat that are not identified as temporarily or permanently impacted in the environmental document. Prior to clearing vegetation or construction within or adjacent to ESAs, the Contractor will install highly visible barriers (e.g., orange construction fencing) adjacent to the project footprint to designate ESAs to be preserved in place. No grading or fill activity of any type will be permitted within these ESAs. In addition, no construction activities, materials, or equipment will be allowed within the ESAs. All construction equipment will be operated in a manner to prevent accidental damage to nearby ESAs. No structure of any kind, or incidental storage of equipment or supplies, will be allowed within the ESAs. Silt fence barriers will be installed at the ESA boundaries to prevent accidental deposition of fill material in areas where vegetation is adjacent to planned grading activities. A qualified biologist will supervise the placement of ESA fencing. TE-2: A preconstruction survey will be conducted by a qualified biologist for the Santa Ana River woolly-star within the BSA in the vicinity of Warm Creek Channel and the Santa Ana River. The preconstruction survey will be conducted during the blooming season (i.e., May to September) prior to initiation of construction activities within the area of Warm Creek Channel and the Santa Ana River. If the species is found within the construction footprint during the preconstruction surveys, then Caltrans will reinitiate consultation with the United States Fish and Wildlife Service (USFWS) and CDFW in accordance with the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA). If present, one or more of the following mitigation strategies will be requi

Table S-1 Project Impact Summary Table

Resource Impacts	Alternative 1 (No Build)	Alternative 2 (One HOV Lane in Each Direction)	Alternative 3 (Two Express Lanes in Each Direction)	Avoidance, Minimization and/or Mitigation Measures
				translocation of local flora species of the region. TE-3: A preconstruction survey will be conducted by a qualified biologist for the slender-horned spineflower within the BSA in the vicinity of Warm Creek Channel and the Santa Ana River. The preconstruction survey will be conducted during the blooming season (i.e., May through September) prior to initiation of construction activities within the area of Warm Creek Channel and the Santa Ana River. If the species is found within the construction footprint during the preconstruction surveys, then Caltrans will reinitiate consultation with USFWS and CDFW in accordance with FESA and CESA. If present, one or more of the following mitigation strategies will be required: purchase of credits from a mitigation bank; onsite conservation of existing slender-horned spineflower through avoidance and designation of ESAs; and/or translocation of slender-horned spineflower outside of the project ROW to areas of suitable habitat, as identified by a Contractor-supplied plant biologist with knowledge of and experience with translocation of local flora species of the region.
				TE-4: Presence/absence surveys for the DSF will be conducted in areas identified by the habitat assessment as potentially suitable habitat during the 2015 and 2016 survey periods. Presence/absence surveys will conform with the latest USFWS guidelines for conducting these surveys, likely to include surveys two times per week from July 1 to September 20 for 2 consecutive years under suitable conditions. If surveys find that DSF are present, Caltrans will initiate formal consultation with USFWS pursuant to FESA Section 7. If presence/ absence surveys determine that DSF are present, mitigation credits will be purchased at a minimum 1:1: ratio for all permanent impacts to occupied suitable DSF habitat. Potential regional DSF conservation programs that may be used for compensatory mitigation include the Reichel Habitat Conservation Plan (HCP), the Angelus Block Property, the Owl Company Property, the Laing Homes (King is Coming) Site, the Hospital Site, the Colton Substation Site, and/or the Vulcan Materials DSF Mitigation Bank. Concurrence by USFWS is required. Caltrans will not begin construction on the proposed project until a Biological Opinion (BO) has been completed, which will require providing documentation to the satisfaction of USFWS regarding successful implementation and funding of the conservation strategy.
Invasive Species	No impact.	The plant palette used for revegetation would not include invasive species; therefore, the build alternatives for the proposed project would not have a substantial effect on invasive species.	The plant palette used for revegetation would not include invasive species; therefore, the build alternatives for the proposed project would not have a substantial effect on invasive species.	IS-1: In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity (i.e., near or adjacent to drainages), extra precautions will be taken if invasive species are found in or next to the construction areas. This will include the inspection and cleaning of construction equipment and eradication strategies, as required by the Caltrans Biological Monitor, to be implemented should an invasion occur. Any cleaning of equipment or site watering will be conducted in adherence to any applicable drought conditions and related regulations.
Cumulative Impacts	Continued and increasing congestion, travel times, and related air emissions.	No adverse cumulative impacts are anticipated.	No adverse cumulative impacts are anticipated.	Project-specific measures described within this table would reduce and minimize potential cumulative impacts.

S-5 Coordination with Public and Other Agencies

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and level of analysis required, and to identify potential impacts, mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including monthly Project Development Team (PDT) meetings, Community Advisory Group (CAG) meetings, meetings with corridor city staff, meetings with other organizations or groups as requested, interagency coordination meetings, public scoping meetings, and public announcements placed in local newspapers, the *Federal Register*, at the County Clerk's office, and in public libraries. Chapter 5, Comments and Coordination, summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

In compliance with 23 U.S.C. 139, Caltrans undertook an extensive effort first to provide an opportunity for public and interagency involvement, followed by agency participation in the definition of the project's purpose and need. Caltrans utilized the 23 U.S.C. 139 guidance to establish a plan to continue providing opportunities for public involvement, as well as closely working with participating and cooperating agencies.

Many means were used to announce the beginning of the environmental process and updates thereafter. Stakeholders in the San Bernardino County area, as well as local, State, and federal agencies, were notified of the commencement of the environmental process for the project, invited to the two public scoping meetings, and given the opportunity to submit comments in a variety of formats.

Between November 2012 and April 2016, SANBAG and Caltrans continued a robust public outreach effort. To date, 903 meetings have been held and fall within the general classifications provided below.

- Public Scoping Meetings Formal Scoping Meetings, advertised for public input.
- Agency Scoping Meeting Formal Scoping Meeting.
- CAG Meetings Meetings to inform local community leaders about the project and gather input from the local community leaders.

- Briefings Meetings with key stakeholders, including local governments (elected officials and City staff), boards, committees, community-based groups, and other entities.
- Grassroots Canvassing Visits to each of the cities and communities along the I-10 corridor, including 'downtown' districts and small business strips, as well as public attractions within that community (e.g., city halls, libraries, senior centers, community centers).
- SANBAG Board Meetings Business matters and/or updates on the project at regularly scheduled SANBAG Board and Committee meetings. Input provided by SANBAG Board Members.
- PDT Meetings.
- Agency Coordination/Tech Workshops.

Native American and cultural resources coordination was also conducted, as described in Chapter 5.

Unresolved Issues and Areas of Controversy

Completion of anticipated permits, licenses, and approvals after ROD

The concept of Express Lanes proposed under Alternative 3 is a new concept in San Bernardino County; therefore, the level of public acceptance is unknown. This may be perceived as a substantial adverse impact.

Project Schedule

Issue ROD

Table S-2 summarizes the general schedule for the project, subject to funding availability and obtaining all required approvals and permits.

MilestoneDateCirculation of Draft EIR/EISSpring 2016Identify Preferred AlternativeSpring 2016Circulation of Final EIR/EISSpring 2017

Table S-2 Project Schedule

Summer 2017 2018

2019

Permits and Approvals Needed

Anticipated begin construction

The permits and/or approvals listed in Table S-3 are anticipated to be required for project construction. Caltrans will work closely with all of the agencies, utility

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companies, municipalities, and/or local jurisdictions to maintain communication and coordination throughout the project development process and receipt of the various permits.

The proposed project is a "Major Project" as defined by FHWA because it would cost in excess of \$500 million. Consequently, FHWA requires that a Project Management Plan and Financial Plan be prepared for the project. Additionally, the project is subject to federal Cost Estimate Reviews. A draft Project Management Plan must be submitted to FHWA prior to approval of the Final EIR/EIS. The Initial Financial Plan must be approved by FHWA prior to authorization of federal aid funds for construction, although it could be submitted for approval as early as issuance of the ROD. The Financial Plan must be updated annually thereafter over the life of the project. The first Cost Estimate Review is required prior to approval of the ROD and must be updated periodically.

Table S-3 Permits and Approvals

Agency	Permits/Approval	Status					
Federal Agency Permits/Approvals							
United States Army Corps of Engineers (USACE)	Section 404 Permit for filling or dredging waters of the U.S.	Section 404 Permit will be obtained prior to project construction. Application for 404 Permit is anticipated after Final EIR/EIS distribution.					
	Project-Level Air Quality Conformity Finding	FHWA concurrence needed prior to approval of Final EIR/EIS and ROD.					
FHWA	Project Management Plan, Initial Financial Plan, and Cost Estimate Review	These documents are required and will be submitted to FHWA after approval of the Final EIR/EIS.					
State A	State Agency Permits/Approvals						
California Department of Fish and Wildlife (CDFW)	Section 1602 Streambed Alteration Agreement	Application for Section 1602 agreement anticipated after Final EIR/EIS distribution. The Section 1602 Agreement will be obtained prior to construction.					
Regional Water Quality Control Board (RWQCB), Region 8 (Santa Ana)	Section 401 Water Quality Certification	Application for Section 401 certification anticipated after Final EIR/EIS distribution. This permit will be obtained prior to construction.					

Table S-3 Permits and Approvals

Agency	Permits/Approval	Status
State Water Resources Control Board (SWRCB)	Construction General Stormwater and Caltrans' Statewide National Pollutant Discharge Elimination System (NPDES) Permits	Project design plans will comply with RWQCB General Orders No. 2009-0009-DWQ (NPDES Permit No. CAS000002) and 99- 06-DWQ (NPDES Permit No. CAS000003).
California Public Utilities Commission (CPUC)	The relocation may qualify for an exemption from the CPUC Certificate of Public Convenience and Necessity (CPCN) requirements discussed in Section III.A of CPUC General Order 131-D and/or pursuant to related case law. Compliance with CPUC General Order 131-D regarding relocation electrical lines 50 kilovolts (kV) or greater	SCE will make the determination of CPUC permitting upon review of further engineering and the Final EIR/EIS. Prior to relocation of electrical lines 50 kV or greater, permit approval must be obtained from CPUC. Coordination to obtain the permit is ongoing.
	Approval of the project, based on review of the Railroad Construction and Maintenance Agreement	Must be completed prior to construction within or above railroad ROW. Coordination has not begun.
UPRR and BNSF	Memorandum of Understanding (MOU) and Construction and Maintenance Agreement with the Railroad	Must be completed prior to construction within or above railroad ROW. Coordination with UPRR and BNSF will begin after approval of the Final EIR/EIS.
County	Agency Permits/Approv	rals
San Bernardino County Flood Control District (SBCFCD)	Encroachment Permit	Letter or permit will be obtained during final design or construction within SBCFCD property. Coordination has not begun. Coordination with SBCFCD will begin after approval of the Final EIR/EIS.
SANBAG	Maintenance, Operations, and Law Enforcement Agreements (Alternative 3 only)	Maintenance, toll operations, and law enforcement agreements between SANBAG, the toll operator, CHP, and Caltrans will be required if Alternative 3 is selected as the Preferred Alternative. These will be obtained prior to opening of the Express Lanes.

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Table S-3 Permits and Approvals

Agency	Permits/Approval	Status				
Utility Company/County and Municipal Service Provider Permits/Approvals						
Atchison, Topeka and Santa Fe Railway, Colton Electric Utility, Southern California Edison, Southern California Gas Company, Union Carbide, American Cablevision, Comcast, IC, Level 3 Communications/Wiltel, Sprint Telecom Corp, Time Warner Cable, Time Warner Telecom, Western Union Telegraph, Verizon (including MCI/GTE), AT&T (including Pacific Bell), Chino Basin Municipal Water District, CCH, City of Ontario, City of Montclair, City of Riverside, City of San Bernardino, City of Upland, CWD, Fontana Water Company, Marygold Mutual Water Company, Metropolitan Water District of Southern California, Monte Vista Water District, Metropolitan Water District, Riverside Highland Water Company, San Gabriel Valley Water, San Antonio Water Company, Southern California Water, SPTC, West Valley Water, Water Facilities Authority, Chino Basin Municipal Water District, City of Colton Water, City of Colton Public Works Department, City of Fontana, City of Ontario, City of Loma Linda Water, City of Montclair, City of Ontario, City of San Bernardino, City of Upland, City of San Bernardino, City of Upland, City of Rialto Department of Public Works, Fontana Public Works, Western Pacific Sanitation, California-Nevada Pipeline, Southern Pacific Railroad, Santa Ana Watershed Project Authority	Approval to relocate, protect in place, or remove utility facilities	Approval will be obtained prior to any construction within utility conflict areas. Coordination will begin following the selection of a Preferred Alternative.				
Local Jui	risdiction Permits/Appro	vals				
Cities of Pomona, Montclair, Upland, Ontario, Fontana, Rialto, Colton, San Bernardino, Loma Linda, and Redlands	Freeway Agreements	Agreements will be concluded with each of the cities in which project construction will take place. Freeway agreements will be developed following the completion of final design. Coordination has not begun.				
Cities of Montclair and Redlands, County of San Bernardino, and Ontario-Montclair School District	Section 4(f) Technical Study finding	Concurrence with finding of impacts to Section 4(f) resources (parks) prior to Preferred Alternative being selected.				

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S-36 I-10 Corridor Project